Exhibit 1

Defendants' Original Invalidity Contentions
(served December 22, 2014)

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

BETTER MOUSE COMPANY, LLC, Plaintiff, v.	§ § § §	
STEELSERIES APS, et al.	§ §	CASE NO. 2:14-CV-198 **LEAD CASE**
MAD CATZ INTERACTIVE, INC., et al.	§	CASE NO. 2:14-CV-204
CORSAIR COMPONENTS, INC., et al.	§	CASE NO. 2:14-CV-283
ASUSTEK COMPUTER INC., et al.	§	CASE NO. 2:14-CV-296
COOLER MASTER CO., LTD., et al.	§	CASE NO. 2:14-CV-297
THERMALTAKE TECHNOLOGY CO., LTD., et al.	§ §	CASE NO. 2:14-CV-299

DEFENDANTS' JOINT INVALIDITY CONTENTIONS

Pursuant to Patent Local Rules 3-3 and 3-4(b), and the Scheduling Order set by the Court's Docket Control Order (Dkt. 95), Defendants Steelseries ApS, Steelseries North America Corp., Mad Catz Interactive, Inc., Mad Catz, Inc., Corsair Components, Inc., Corsair Memory, Inc., Asustek Computer Inc., Asus Computer International, Cooler Master Co., Ltd., CMI USA, Inc. D/B/A Cooler Master USA, Inc., Thermaltake Technology Co., Ltd., and Thermaltake Inc. (collectively, "Defendants") hereby jointly serve their Invalidity Contentions for U.S. Patent No. 7,532,200 (the "'200 Patent") on Plaintiff Better Mouse Company LLC ("BMC").

These Invalidity Contentions are directed to invalidity issues only and do not address noninfringement, unenforceability, or claim construction issues. Defendants reserve all rights with respect to such issues. These Invalidity Contentions are preliminary and are based on Defendants' current knowledge, understanding, and belief as to the facts and information available as of the date of these Invalidity Contentions. Discovery in this action is ongoing. BMC has not yet produced all documents concerning its conception or reduction to practice of the '200 Patent or any documents relating to the purported meaning of claim terms used in the '200 Patent, and Defendants have not completed their investigation, discovery, or analysis of information related to this action. While Defendants have made a good-faith effort to provide a

comprehensive list of prior art relevant to their contention of invalidity, Defendants reserve the right to amend, supplement, or materially modify their prior art list and their invalidity contentions as discovery progresses. This reservation includes the right to supplement prior art under 35 U.S.C. §§ 102(a)-(g), 103, 112, and based on information Defendants may learn during discovery in this case.

Defendants provide these Invalidity Contentions prior to any claim construction ruling by the Court with respect to the claims of the '200 Patent asserted by BMC in its disclosures of asserted claims and infringement contentions. Any invalidity analysis depends, ultimately, upon claim construction, which is a question of law reserved for the Court. Defendants reserve the right to amend, supplement, or materially modify their prior art list and invalidity contentions after the asserted claims have been construed by the Court. Defendants also reserve the right to amend, supplement, or materially modify their prior art list and invalidity contentions based on any claim construction positions that BMC may take in this case. Defendants further reserve the right to assert that a claim is indefinite, not enabled, or fails to meet the written description requirement during or after the claim construction process, including based on any claim construction position BMC may take or based on any claim construction the Court may adopt in this case.

These Invalidity Contentions are further made without the benefit of the Court's Claim Construction Order, which Defendants believe will show BMC's improper application of the claims, when properly construed. To the extent that the following contentions reflect interpretations of claim limitations consistent with or implicit in BMC's Infringement Contentions, no implication is intended nor should any inference be drawn that Defendants agree with BMC's interpretation, and Defendants expressly reserve their right to contest such interpretations in defending against accusations of infringement. Accordingly, Defendants also reserve the right to supplement or modify these Invalidity Contentions based on the claim construction phase of the case, including any claim construction order provided by the Court.

Prior art not included in these contentions, whether known or not known to Defendants, may become relevant. In particular, Defendants are currently unaware of the extent, if any, to which Plaintiff will contend that limitations of each asserted claim is not disclosed in the prior art identified by Defendants. To the extent that such an issue arises, Defendants reserve the right to identify or chart other references that anticipate the claim or would render obvious the allegedly missing limitation(s) of the disclosed device or method. In addition to the prior art identified below and the accompanying invalidity claim charts, Defendants also incorporate by reference any additional invalidity contentions, identified prior art, or invalidity claim charts disclosed at any later date by any Defendant in the present litigation or by any party to any other litigation or U.S. Patent & Trademark Office proceeding involving the asserted patent or any related patent.

For each of the Defendants' accused products, BMC has identified certain elements of the accused products that it has accused as meeting certain limitations of the asserted patent. Defendants do not agree with, and do not adopt, the interpretation of the limitations as represented in BMC's infringement charts. BMC's interpretations of the claim limitations are contrary to the express disclosure of the asserted patent's specification, are contrary to the express statements made to the USPTO by BMC's patent counsel during the prosecution of the application that resulted in the asserted patent, and are contrary to the proper construction of the asserted claims. Defendants have, in some instances, applied what appears to be BMC's interpretations for the limited purpose of illustrating that the prior art discloses the claim elements of the asserted patent under BMC's claim interpretations. Accordingly, Defendants have used BMC's apparent interpretations and applications of the claim limitations in the asserted patent for the sole purpose of applying the prior art against the claims of the asserted patent. Defendants' Invalidity Contentions address both BMC's positions and constructions as represented in its Infringement Contentions and the proper constructions of the asserted claims as proposed by Defendants. Furthermore, no implication is intended nor should any inference be drawn that the claim limitations satisfy the statutory requirements of 35 U.S.C. § 112, and Defendants reserve their right to contend otherwise.

Defendants provide citations to exemplary portions of the prior art for the purpose of fairly disclosing Defendants' Invalidity Contentions. Other portions of each prior art reference may also disclose the elements of the asserted claims either explicitly or inherently, or may be relied upon to show the state of the art in the relevant timeframes, and/or may be relied upon as further evidence of obviousness. The specific combinations of references and reasons for their combination provided below with respect to obviousness under 35 U.S.C. § 103 are merely exemplary and are not intended to be exhaustive. Numerous additional reasons and obviousness combinations of the references identified below are possible and apparent, and Defendants reserve the right to use any such combinations in this litigation.

The accompanying invalidity claim charts in Exhibit A list specific examples in which prior art references disclose, either expressly or inherently, each limitation of the asserted claims and/or examples of disclosures in view of which a person of ordinary skill in the art would have considered each limitation obvious. Defendants have endeavored to identify the most relevant portions of the references. The references, however, may contain additional support for particular claim limitations. Defendants may rely on uncited portions of the prior art references, other documents, and expert testimony to provide context or to aid in understanding the cited portions of the references. Where Defendants cite to a particular figure in a reference, the citation should be understood to encompass the caption and description of the figure and any text relating to the figure. Similarly, where Defendants cite to particular text referring to a figure, the citation should be understood to include the figure as well.

It should be recognized that a person of ordinary skill in the art would generally read a prior art reference as a whole and in the context of other publications, literature, and general knowledge in the field. To understand and interpret any specific statement or disclosure in a prior art reference, a person of ordinary skill in the art would rely upon other information including other publications and general scientific, engineering or other relevant knowledge. Defendants therefore reserve the right to rely upon other unidentified portions of the prior art references and on other publications and on expert testimony to provide context and to aid

understanding and interpretation of the references. Defendants also reserve the right to rely upon other portions of the prior art references, other publications, and the testimony of experts to establish that the alleged inventions would have been obvious to a person of ordinary skill in the art, including on the basis of modifying or combining certain cited references. Defendants also reserve the right to rely upon any admissions relating to prior art in the '200 Patent, its prosecution histories or other evidence.

Defendants also rely upon these references (as well as the state of the art known to a person of ordinary skill in the art at the time, as evidenced at least partially by the references cited during prosecution of the asserted patent) to provide examples of what a person of ordinary skill in the art would have known at that time, to provide examples of references a person of ordinary skill in the art would have combined to address the needs purportedly met by the asserted patent, and to provide evidence of such a motive to combine.

I. U.S. PATENT NO. 7,532,200

A. Anticipation

BMC accuses various computer mouse products sold or distributed by Defendants of infringing one or more of claims 1-4[1] and 6-9 of the '200 Patent (collectively, the "Asserted Claims"). (*See* BMC's P.R. 3-1 and 3-2 Disclosures ("Infringement Contentions").) Pursuant to Patent Local Rule 3-3(a), and in response to BMC's Infringement Contentions, Defendants identify the following items of prior art that Defendants contend or may contend anticipate and/or render obvious the Asserted Claims. These references alone, or in combination, render each of the Asserted Claims invalid under 35 U.S.C. § 102 and/or 35 U.S.C. § 103.

1. *Changeable Input Ratio Mouse*, UK Patent Application GB 2215455 to Kwang-Chien, published September 9, 1989.
2. *Changeable Input Ratio Mouse*, U.S. Patent No. 4,963,858 to Chen, issued October 16, 1990.

[1] Claim 4 has been asserted only against Defendants Mad Catz and Steelseries. Defendants incorporate by reference disclosures relating to Claim 9 as applying equally to Claim 4.

3. Japanese Utility Model Application No. JPY-H3-53322 to Kimura, published November 21, 1991.

4. Japanese Patent Application No. JPA-H3-278219 to Mihara, published on December 9, 1991.

5. *Computer Mouse with Dual Function Operating Keys – Used for Direct Control of Path-Pixel Ratio*, DE 4125049 to Hennig, Published January 16, 1992.

6. *Interactive Ballistic Tracking Apparatus*, U.S. Patent No. 5,119,077 to Giorgio, issued June 2, 1992.

7. *Multi-dimensional Input Device*, U.S. Patent No. 5,298,919 to Chang, issued March 29, 1994.

8. Japanese Patent Application No. JPA-H8-123615 to Wa et al., published May 17, 1996.

9. *Computer Mouse and Shell Therefore*, U.S. Patent No. 5,894,303 to Barr, issued on April 13, 1999.

10. *Computer Input Device with Multiple Switches Using Single Line*, U.S. Patent No. 6,069,594 to Barnes et al., issued on May 30, 2000.

11. *Interface Device and Method for Providing Enhanced Cursor Control with Force Feedback*, U.S. Patent No. 6,252,579 to Rosenberg, issued June 26, 2001.

12. Japanese Utility Model Application No. JP3090806 (U), published October 9, 2002.

13. *Enabling Manual Adjustment of Pointing Device Cursor Speed*, U.S. Patent Publication No. 2002/0135563 to Canakapalli, published September 26, 2002.

14. *Method for Increasing Resolution of Mouse Movement on Screen*, U.S. Patent Publication No. 2002/0171622 to Shen et al., published November 21, 2002.

15. *Mouse Control for Scrolling Switch Options Through Screen Icon for the Switch*, U.S. Patent No. 6,532,001 to Taraki, issued March 11, 2003.

16. *Capacitive Mouse*, U.S. Patent No. 6,587,093 to Shaw et al., issued July 1, 2003.

17. Kensington Turbo Mouse trackball advertisement, published in InfoWorld July 11, 1988.

18. Requirements-analysis for a USB keyboard microcontroller published December 20, 1996, by Digital Systems Group, Department of Electrical Engineering, Eindhoven University of Technology ("USB PS/2 Mouse").

19. Computer Peripherals Undergraduate Course at Nanyang Technology University, Singapore, available at http://www.lintech.org/comp-per/ dated October 16, 2001.

20. Mystify Razer Boomslang 2100 Product Manual, http://ftp.terratec.com/Discontinued_Products/GamingSystems/MystifyRazer2100/Manual/RazerBoomslang2100_Manual_GB.pdf, at least as early as June 11, 2003.

21. PS/2 Mouse Interface Article written on April 1, 2003 ("PS/2 Mouse Interface").

22. IOGEAR GME 222 800 dpi USB Optical Mini Mouse Product Manual, http://www.iogear.com/support/manual/GME222%20manual.pdf at least as early as December 31, 2003.

Defendants believe that the references identified above constitute anticipatory prior art against one or more claims of the '200 Patent, including at least the claims listed above, particularly in view of the broad claim interpretation advanced by BMC in its Infringement Contentions. The prior art references cited above disclose all of the limitations of the asserted claims either explicitly, implicitly, or inherently as shown in attached Exhibit A.

B. Obviousness

Pursuant to Patent Local Rule 3-3(b), and in response to BMC's Infringement Contentions, Defendants identify in Exhibit A their preliminary contentions as to whether each of the identified items of prior art above anticipate each Asserted Claim and/or render each Asserted Claim obvious under 35 U.S.C. § 102 and/or 35 U.S.C. § 103. Where Defendants contend an identified item of prior art renders an Asserted Claim obvious, Defendants provide a brief explanation to support their contention of obviousness. Such explanations of obviousness are representative of the obvious nature of the teachings of the listed references, and Defendants reserve the right to modify such explanations by adding additional contentions and explanations to the extent such modification is appropriate in light of any additional information gained through ongoing investigations and discovery, in light of arguments made or positions taken by BMC, or by virtue of rulings of the Court.

To the extent necessary, the suggestion to combine the teachings of the various prior art references identified is provided by the references themselves as filtered through the knowledge of one skilled in the art and by the nature of the alleged problem purportedly sought to be solved by the '200 Patent. In addition, each item of prior art establishes an implicit motivation to apply the teachings of the prior art to known virtual environments to provide capabilities of traditional academic courses and knowledge. Here, the general desire to provide an apparatus and method that would allow a user to set the multi-stage displacement resolution of a computer was well understood and addressed in the prior art. Defendants reserve the right to supplement and amend these Invalidity Contentions based on further investigation, construction of the claims by the Court, and modification of BMC's contentions.

1. Items Nos. 1-22, listed above at Section I.A.
2. *Mouse Driver Arrangement for Providing Advanced Scrolling Capabilities to a Conventional Mouse*, U.S. Patent No. 5,633,657 to Falcon, issued May 27, 1997.
3. *Combination Computer Mouse and Game Play Control*, U.S. Patent No. 5,692,956 to Rifkin, issued December 2, 1997.
4. *Feedback of Object Size During Direct Manipulation*, U.S. Patent No. 5,874,943 to Fitzpatrick et al., issued February 23, 1999.
5. *System, Method and Apparatus for Loading Drivers, Registry Settings and Application Data onto a Computer System during a Boot Sequence*, U.S. Patent No. 6,718,463 to Malik, issued April 6, 2004.
6. Texas Instruments Application Note LMC555, Literature Number SNAA005.
7. Article, *The Camera Mouse: Visual Tracking of Body Features to Provide Computer Access for People with Severe Disabilities*, Betke, Gips, IEEE TRANSACTIONS ON NEURAL SYSTEMS AND REHABILITATION ENGINEERING, VOL. 10, NO. 1, MARCH 2002.

Each prior art reference disclosed above, either alone or in combination with any of the other prior art discussed herein, renders the asserted claims invalid as obvious. In particular, each prior art reference may be combined with (1) information known to persons skilled in the art at the time of the alleged invention, (2) any of the other prior art references, and/or (3) any of the references cited during prosecution of the '200 Patent. To the extent BMC contends that any of the prior art references fails to disclose one or more limitations of the asserted claims, Defendants reserve the right to identify other prior art that would supply any such limitation(s) which, when combined with the other prior art, would render the claimed subject matter obvious. Defendants also reserve the right to rely upon, and hereby incorporate by reference, all of the references cited during the prosecution of U.S. Patent Application No. 11/036,127, which issued as the '200 Patent, including all references listed in the "References Cited" section of the '200 Patent. Defendants further reserve the right to rely on the uncharted prior art included in the accompanying production.

BMC has not yet taken a position regarding which limitations, if any, it contends are missing from the prior art references listed above. Although Defendants believe that any such contention would be without merit, Defendants contend that any claim limitation allegedly

missing from one of the listed prior art references is disclosed in one or more of the other prior art references, as shown in the attached claim charts (See Exhibit A). Defendants therefore contend that a person of ordinary skill in the art would find the asserted claims an obvious combination of two or more of the prior art references cited above.

C. Motivation to Combine

The Supreme Court of the United States clarified the standard for evaluating obviousness in *KSR Int'l Co. v. Teleflex, Inc*., 127 S.Ct. 1727 (2007). The Court emphasized that "[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *Id*. at 1739.

When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill. . . . [A] court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions. *Id*. at 1740. Moreover, the Court elaborated that any motivation to combine known elements disclosed by prior art patents or other references need not be explicitly discussed in the references themselves, "for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *Id.* at 1741. The Court further observed:

When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense. In that instance the fact that a combination was obvious to try might show that it was obvious under § 103. *Id*. at 1742. *See also Dystar Textilfarben GmbH v. C.H. Patrick Co*., 464 F.3d 1356, 1368 (Fed. Cir.

2006) (explaining that when the "combination of references results in a product or process that is more desirable, for example because it is stronger, cheaper, cleaner, faster, lighter, smaller, more durable, or more efficient," there exists a motivation to combine prior art references even where there is no explicit suggestion in the references themselves "[b]ecause the desire to enhance commercial opportunities by improving a product or process is universal – and even common-sensical"); *LeapFrog Enterprises, Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157 (Fed. Cir. 2007) (applying KSR and holding that "one of ordinary skill in the art of children's learning toys would have found it obvious to combine the Bevan device with the SSR to update it using modern electronic components in order to gain the commonly understood benefits of such adaptation, such as decreased size, increased reliability, simplified operation, and reduced cost").

Here, each of the above identified references is related to the computer input device mouse field, including setting different parameters for the mouse speed and resolution. A person of ordinary skill in the art had reason to combine various features of the known device configuration systems, methods, and apparatuses. If nothing else, it would have been obvious to try adding such features to existing systems, in response to various market opportunities that drove the development of computer peripherals including mouse.

The reason to combine the teachings of the various prior art references is also provided by the references themselves as they would be understood by those of ordinary skill in the art and by the nature of the problems to be solved, as would have been apparent to those in the art. Video gaming systems evolved into sophisticated systems that require quick and fast adjustments of computer mouse setting to give an advantage in the game. For example, U.S. Patent No. 5,874,943 to IBM explains the methods of using software to set different mouse parameters including resolution. Prior art peripheral devices with different types of manual switches were already available in the market. *See, e.g.*, U.S. Patent No. 5,298,919. The concept of achieving setting a mouse device parameter i.e. resolution with a manual switch was known in the prior art before the effective filing date of the '200 Patent.

Furthermore, there were key players in the computer peripherals and video gaming accessories who were already bringing out competing products in the market. *See, e.g.*, Kingston Mouse, Bloomslang and IOGear GME. Many of these references, as well as others, generally identify and address the same issues and suggest similar solutions as the '200 Patent. The references above, along with the exemplary citations to the references disclosed in the attached charts, would have been considered by a person having ordinary skill in the art, leading them to the same solution as what is covered by the claims of the '200 Patent.

The claims asserted by BMC merely combine elements previously disclosed in the references and/or known to a person of ordinary skill in the art in a manner that does no more than yield predictable results. The asserted claims simply arrange old elements known in the art, with each performing the same function it had been known to perform, and the arrangements yield no more than one would expect from such an arrangement. The combinations of old elements in the asserted claims were not beyond the level of skill in the art as of any potential priority date.

To the extent that BMC alleges that the above-identified prior art references do not disclose the claimed limitations of the '200 Patent, a person of ordinary skill in the art would have been motivated to combine the teachings of the above-identified references (and the knowledge of a person of ordinary skill in the art) based on the nature of the problem to be solved, design needs, and market pressures.

D. Obviousness Combinations for Claim Limitations

Defendants contend that each of the prior art references identified above pursuant to Patent Local Rule 3-3(a), renders each and every claimed element of each Asserted Claim of the '200 Patent obvious for at least the reasons discussed in Exhibit A.

1. Claims 1 and 6 "An apparatus for setting multi-stage displacement resolution of a mouse comprising"

Defendants contend that the prior art references (as identified in more detail above) disclose, teach, and anticipate each and every claimed element or limitation of each Asserted

Claim, whether explicitly or inherently, and enable one of ordinary skill in the art to make the invention without undue experimentation: *See, e.g.*, JP-H08-123615, U.S. Patent No. 4,963,858, 5,119,077, IO Gear GME. To the extent that BMC contends that any of the references identified in Anticipation Section above do not disclose this limitation, the limitation is obvious in light of the background knowledge possessed by a person of ordinary skill in the art, and/or the limitation can be found, for example, in each of the references. *Id.*

A person of ordinary skill in the art would have been motivated to combine at least the above references so as to make this element obvious at least because the industry enabled a plurality of different mice that allowed for on the fly settings including resolution settings. A person of ordinary skill in the art would have understood the advantages of providing a method to manually set the resolution to gain advantage in speed for video gaming. The references themselves also suggest their use in a variety of applications and combinations, further supporting a finding that this element is obvious. In addition, the nature of the problem as recognized in the prior art would have directed one of ordinary skill in the art to consider the disclosures of all of the above references to render obvious the claimed subject matter.

2. **Claims 1A and 6A "a X-Y plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;"**

Defendants contend that the prior art references (as identified in more detail above) disclose, teach, and anticipate each and every claimed element or limitation of each Asserted Claim, whether explicitly or inherently, and enable one of ordinary skill in the art to make the invention without undue experimentation: *See, e.g.*, JP-H08-123615, U.S. Patent No. 4,963,858, 5,119,077, IO Gear GME; references cited in Anticipation Section. A computer peripheral mouse device inherently detects X-Y plane displacement and senses direction and distance. *Id.*

3. **Claim 1B "a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to generate the resolution value directly, each switch being coupled to a resolution setting pin, each resolution setting pin having a state determined by the switch coupled thereto; and" and Claim 6B "an N-stage switch for setting a resolution value, the N-stage switching circuit having a switching button capable of being manually switched to one of the positions 1 to N, and**

accordingly activating a connected resolution setting pin to indicate a state, where N is a positive integer; and"

Defendants contend that the prior art references (as identified in more detail above) disclose, teach, and anticipate each and every claimed element or limitation of each Asserted Claim, whether explicitly or inherently, and enable one of ordinary skill in the art to make the invention without undue experimentation: *See, e.g.*, JP-H08-123615, U.S. Patent No. 4,963,858, 5,119,077, IO Gear GME. To the extent that BMC contends that any of the references identified in Anticipation Section above do not disclose this limitation, the limitation is obvious in light of the background knowledge possessed by a person of ordinary skill in the art, and/or the limitation can be found, for example, in each of the references. *Id.*

A person of ordinary skill in the art would have been motivated to combine at least the above references so as to make this element obvious at least because he or she would have understood the advantages of providing resolution values to get a fast and speedy update of the mouse resolution parameter.

To the extent BMC contends for its infringement reading that, an N-stage switching circuit does not require multiple switches because any included single switch has two or more states i.e. on or off or in binary mode 0 or 1, applying the same read, prior art discloses this limitation. The references themselves also suggest their use in a variety of applications and combinations, further supporting a finding that this element is obvious. In addition, the nature of the problem as recognized in the prior art would have directed one of ordinary skill in the art to consider the disclosures of all of the above references to render obvious the claimed subject matter.

4. **Claims 1C and 6C "a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the states of the resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the**

computer, the mouse cursor being moved directly based on the resolution value stored in the register."

Defendants contend that the prior art references (as identified in more detail above) disclose, teach, and anticipate each and every claimed element or limitation of each Asserted Claim, whether explicitly or inherently, and enable one of ordinary skill in the art to make the invention without undue experimentation: *See, e.g.*, JP-H08-123615, U.S. Patent No. 4,963,858, 5,119,077, IO Gear GME. To the extent that BMC contends that any of the references identified in Anticipation Section above do not disclose this limitation, the limitation is obvious in light of the background knowledge possessed by a person of ordinary skill in the art, and/or the limitation can be found, for example, in each of the references. *Id.*

A person of ordinary skill in the art would understand that any computer peripheral device including a mouse includes a micro-controller or an equivalent micro-processor to perform the functions of interacting with the mouse driver in the operating system of the attached computer. *See, e.g.*, Texas Instruments Application Note LMC555. It is well known in the art for micro-controllers to write using registers, detect parameter values, store the values and respond to these values based on distance moved and direction including providing these sensor feedback to the computer. For example, setting mouse parameters including speed and sensitivity were part of the obvious solution and registers were well known in the art. *See, e.g.*, U.S. Patent Nos. 5,633,657; 6,718,463. A person of ordinary skill in the art would have understood the advantages of providing resolution values to get a fast and speedy update of the mouse resolution parameter. The references themselves also suggest their use in a variety of applications and combinations, further supporting a finding that this element is obvious. In addition, the nature of the problem as recognized in the prior art would have directed one of ordinary skill in the art to consider the disclosures of all of the above references to render obvious the claimed subject matter.

5. **Claim 2 and 7 "a button set for clicking an icon selected by the mouse cursor"**

Defendants contend that the prior art references (as identified in more detail above) disclose, teach, and anticipate each and every claimed element or limitation of each Asserted Claim, whether explicitly or inherently, and enable one of ordinary skill in the art to make the invention without undue experimentation: *See, e.g.*, JP-H08-123615, U.S. Patent No. 4,963,858, 5,119,077, IO Gear GME. To the extent that BMC contends that any of the references identified in Anticipation Section above do not disclose this limitation, the limitation is obvious in light of the background knowledge possessed by a person of ordinary skill in the art, and/or the limitation can be found, for example, in each of the references. *Id.*

A person of ordinary skill in the art would understand that any computer peripheral device including a mouse were used to click on different portions of the display screen of the computer that included icons. The references themselves also suggest their use in a variety of applications and combinations, further supporting a finding that this element is obvious. In addition, the nature of the problem as recognized in the prior art would have directed one of ordinary skill in the art to consider the disclosures of all of the above references to render obvious the claimed subject matter.

6. Claims 3 and 8 "wherein the button set has a left button and a right button;"

Defendants contend that the prior art references (as identified in more detail above) disclose, teach, and anticipate each and every claimed element or limitation of each Asserted Claim, whether explicitly or inherently, and enable one of ordinary skill in the art to make the invention without undue experimentation: *See, e.g.*, JP-H08-123615, U.S. Patent No. 4,963,858, 5,119,077, IO Gear GME; references cited in Anticipation Section. A computer peripheral mouse device including a button set that had a left and right button were well known in the art. *Id.*

7. Claims 4 and 9 "the N-stage switch is configured on a lateral surface of the mouse;"

Defendants contend that the prior art references (as identified in more detail above) disclose, teach, and anticipate each and every claimed element or limitation of each Asserted Claim, whether explicitly or inherently, and enable one of ordinary skill in the art to make the

invention without undue experimentation: *See, e.g.*, JP-H08-123615, U.S. Patent No. 4,963,858, 5,119,077, IO Gear GME; references cited in Anticipation Section. A computer peripheral mouse device including a switch configured on a lateral surface were well known in the art. *Id.* It is obvious that a lateral surface switch would be convenient to access when browsing a computer and playing a video game and is easy to separate out from the input buttons on the mouse.

E. Specific Identification of Asserted Claim Elements in the Identified Prior Art

Pursuant to Patent Local Rule 3-3(c), and in response to BMC's Infringement Contentions, attached as Exhibit A is are claim charts that specifically detail and identify where each element or limitation of each of the Asserted Claims may be found in specific prior art references. Citations to the prior art references are exemplary; other support for Defendants' contentions may be found elsewhere within the cited references. The charts that are Exhibit A, at least in part, are based upon the positions taken by BMC in its Infringement Contentions and are provided without adopting the positions reflected in BMC's Infringement Contentions. The identification of structure or steps in the prior art is not intended to reflect Defendants' claim interpretations, either directly or by implication.

Defendants reserve the right to modify these contentions by adding additional prior art references to the extent such modification is appropriate in light of any additional information gained through ongoing investigations or through discovery or in light of arguments made or positions taken by BMC.

F. Invalidity Pursuant to 35 U.S.C. § 112 Paragraph 2 and 35 U.S.C. § 112 Paragraph 1

Pursuant to Patent Local Rule 3-3(d), Defendants contends that certain claims of the Asserted Patent are invalid under 35 U.S.C. § 112 because: (1) the claims lack adequate written description; (2) the claims are not enabled; and/or (3) the claims are indefinite. Defendants' Contentions that the following claims are invalid under § 112 are made in the alternative and do not constitute, and should not be interpreted as, admissions regarding the construction or scope

of the claims of the Asserted Patents or that any of the claims of the Asserted Patents are not anticipated or rendered obvious by any prior art.

For each claim identified as invalid, any dependent claims of those invalid claims are also invalid under 35 U.S.C. §§ 112(1) and/or 112(2). Defendants reserve the right to supplement and amend these contentions based on further discovery and investigation including, in particular, the deposition of the named inventor of the Asserted Patents, the parties' claim construction positions, and further review and investigation of Plaintiff's infringement positions.

Following are the grounds upon which Defendants contend the asserted claims of the '200 Patent are invalid failure to meet the enablement, written description, and definiteness requirements:

1. Lack of Written Description Under 35 U.S.C. § 112, ¶ 1

In general, the specification of the '200 Patent does not provide an adequate written description to support the scope of the claims sought by Plaintiff in furtherance of its infringement theories. The first paragraph of 35 U.S.C. § 112 requires a patent specification to contain "a written description of the invention." The written description "must do more than merely disclose that which would render the claimed invention obvious." *ICU Med., Inc. v. Alaris Med. Sys., Inc.*, 558 F.3d 1368, 1377 (Fed. Cir. 2009). The written description must "clearly allow persons of ordinary skill in the art to recognize that the inventor invented what is claimed" by the time of the application filing date. *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). Thus, a written description is inadequate where the claim in question exceeds the scope of what the patent discloses by (for example) omitting an attribute of the described invention from the limitations, thereby over-extending the reach of the claim *ICU*, 558 F. 3d at 1377-78.

All claims in the '200 Patent that recite or relate to the "resolution value" limitations of claims 1 and 6, and all claims depending therefrom, are not supported by the written description, for example, the application as filed does not convey that the inventor had possession of

corresponding subject matter as reflected in Plaintiff's infringement contentions and in Plaintiff's response to the pending Petition for Inter Partes Review.

2. Lack of Enablement Under 35 U.S.C. § 112, ¶ 1

The first paragraph of 35 U.S.C. § 112 requires a patent to describe "the manner and process of making and using [the claimed invention], in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same." A patent must disclose enough to permit a person of skill in the art, after reading the specification, to practice the claimed invention without undue experimentation. *Sitrick v. Dream works, LLC*, 516 F.3d 993, 999 (Fed Cir. 2008). Moreover, "[t]he full scope of the claimed invention must be enabled." *Id.*; *see also id.* at 1000 ("Because the asserted claims are broad enough to cover both movies and video games, the patents must enable both embodiments.").

All claims in the '200 Patent that recite or relate to the "resolution value" limitations of claims 1 and 6, and all claims depending therefrom, are invalid because the specification does not enable a person of ordinary skill in the art to make and use the full scope of these claims without undue experimentation.

3. Indefiniteness Under 35 U.S.C. § 112, ¶ 2

The second paragraph of 35 U.S.C. § 112 requires that a patent claim "particularly point out and distinctly claim[] the subject matter which the applicant regards as his invention." Claim terms that are insolubly ambiguous fail the definiteness requirement of § 112 because such terms do not permit a person of skill in the art to understand with precision what is inside and outside the scope of the claim. *See Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014); *see also Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir. 2005).

All claims in the '200 Patent that recite or relate to the "mouse resolution" and "resolution value" limitations of claims 1 and 6, and all claims depending therefrom, are invalid

because they fail to particularly point out and distinctly claim the subject matter that the applicants regard as their invention:

Defendants reserve the right to modify these contentions by adding additional assertions of indefiniteness to the extent such modification is appropriate in light of any additional information gained through ongoing investigations or through discovery or in light of arguments made or positions taken by BMC.

II. DOCUMENT PRODUCTION ACCOMPANYING INVALIDITY CONTENTIONS

Pursuant to Patent Local Rule 3-4(b), Defendants will produce herewith each item of prior art identified pursuant to Patent Local Rule 3-3(a), which does not appear in the file history of the '200 Patent.[2] (*See* BMCDEFTS 000001-000548.)

Dated: December 22, 2014

Respectfully submitted,

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[2] Each Defendant shall conduct a good faith search for documents responsive to Patent Local Rule 3-4(a) and shall serve such documents, if any, separately.

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CERTIFICATE OF SERVICE

I certify that all counsel of record are being served with a copy of this document via electronic mail on December 22, 2014.

/s/ *Tyson E. Marshall*
Tyson E. Marshall

EXHIBIT A

Invalidity of Asserted Claims of U.S. Patent No. 7,532,200
Under 35 U.S.C. §§ 102(b) and 103 by U.S. Patent No. 4,963,858 ("Chien")[1]

Based upon the claim interpretations Better Mouse Company, LLC ("BMC") appears to be asserting and the applications of those interpretations to Defendants' products in BMC's Infringement Contentions, **U.S. Patent No. 4,963,858** anticipates and/or renders obvious, alone or in combination with other prior art identified in Defendants' Invalidity Contentions, the asserted claims as described in part below. This invalidity claim chart is not an admission by Defendants that the accused products, including any current or past versions of these products, are covered by, or infringe these claims, particularly when they are properly construed. Nothing in these contentions should be interpreted as an acquiescence to or assertion of a particular claim construction by Defendants.

	'200 Claim Language	**U.S. Patent No. 4,963,858**
1.	1. An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	Chien discloses an apparatus that sets the multi-stage displacement resolution of a mouse. Ex. B, at Abstract ("An input device in the form of a manually moveable unit or 'mouse' provides coordinate-data information responsive to movement of the mouse across a planar surface. The mouse includes at least one manually operable button for changing a ratio of distance of mouse movement across the planar surface to an amount of coordinate-data information value change."); 1:8-13 ("The present invention relates to a changeable input ratio mouse which is combined by hardware and software to change ratio of the actual slide distance of the mouse and the corresponding distance of the moving cursor on screen to achieve lower cost and facilitate use thereof."); 4:5-25 (claim 1, claiming

[1] U.S. Patent No. 4,963,858 to Chien (filed August 7, 1989) ("Chien"). Because Chien issued on October 16, 1990, which was well before the January 18, 2005, filing date of U.S. Patent No. 7,532,200 ("the '200 Patent"), Chien constitutes prior art under 35 U.S.C. §§ 102(b). To the extent that Chien is found not to anticipate one or more claims of the '200 Patent under 35 U.S.C. §102, Chien renders those claims obvious under 35 U.S.C. §103 when combined with other art identified in Defendants' Invalidity Contentions (*e.g.*, the OmniScan hand scanner described in the December 7, 1993 issue of PC Magazine ("OmniScan"). It would have been obvious to combine the teaching of Chien with other art identified in Defendants' Invalidity Contentions at least because the references all pertain to setting multi-stage displacement resolution of a computer mouse directly through a switch on the mouse.

	’200 Claim Language	U.S. Patent No. 4,963,858
		apparatus for setting mouse resolution).
1A	a X-Y axis plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	Chien discloses an X-Y axis plane displacement detector that senses the distance and moving direction of the mouse. *Id.*, at 1:57-59 (“Sliding of the mouse generates X and Y assembly signals which are input from the output/input port #1.”); 3:8-10 (“The input device includes detection circuitry for measuring sliding distances in two coordinates of the housing over a surface in contact with the housing.”); 4:9-10 (claim limitation requiring “detecting means for measuring sliding distances in two coordinates of said housing over a surface”); Fig. 3 (particularly, element “X, Y assemble input”).
	a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to generate the resolution value directly, each switch being coupled to a resolution setting pin, each resolution setting pin having a state determined by the switch coupled thereto; and	Chien discloses a switching circuit for setting a resolution value. *Id.* at 1:16-19 (“The present invention relates to a changeable input ratio mouse including a switch location the mouse operable so that a signal input ratio can be changed responsible to a position of the switch.”); 1:53-63 (“In FIG. 3 showing the circuit diagram of the present invention, … two acceleration switches are positioned on it, thus enabling selection of three different types functions of accelerated transfer ratio… Accelerated motion switches 2 are each connected to respective terminals P13, P14 of output/input port #1.”); 4:12 (claim limitation requiring “manually activated switching means”); Fig. 3 (particularly, element 2). In the preferred embodiment of Chien, the switching circuit includes multiple switches that can be manually adjusted. *Id.*, at 5:20-22 (“Switch assembly 12 comprises two single pole double throw (SPDT) switches…”); 1:16-19 (“The present invention relates to a changeable input ratio mouse including a switch location the mouse operable so that a signal input ratio can be changed responsible to a position of the switch.”); 1:53-63 (“In FIG. 3 showing the circuit diagram of the present invention, … two acceleration switches are positioned on it, thus

	’200 Claim Language	U.S. Patent No. 4,963,858
		enabling selection of three different types functions of accelerated transfer ratio… Accelerated motion switches 2 are each connected to respective terminals P13, P14 of output/input port #1.”); Fig. 3 (particularly, elements 2 and P13/P14). The switches correspond to different mouse resolutions, allowing the user to increase resolution by specific preset factors simply by depressing the switches. Id., at 4:14-17 (“said measured sliding distances at least one of which is selectively multiplied by a predetermined constant in response to activation of said manually activated switch means”). The switching circuit shown in the dashed box of Figure 3 of Chien changes the mouse resolution directly because it does not require use of a software driver/tool running on a computer to which the mouse is connected. A person of ordinary skill in the art would understand that the term “software,” as used by Chien, refers to a program running on the mouse microcontroller and not to a program that is running on the computer to which the mouse is attached. The specification states that “a processor contained in the housing” of the mouse is responsive to the accelerator switches – *i.e.*, the switches used to change mouse resolution. Ex. B, at 3:10-12 (“A processor contained in housing 1 is responsive to the motion detection circuitry and to switches 2, 3…”). Additionally, the specific microcontroller identified in the preferred embodiment is the Intel 8048 (*id.*, 1:53-57; Fig. 3), a well-known microprocessor, suitable for use in computer accessories – like mice and keyboards – but not suitable for use as the CPU of the personal computer itself. A person of ordinary skill in the art would know this. On information and belief, the mouse microprocessor disclosed in Chien must have “pins.” Pins are necessary for an integrated circuit such as a microcontroller to electrically interface with other electrical components and/or a circuit board. Since the microcontroller of Chien electrically interfaces with several other

	’200 Claim Language	U.S. Patent No. 4,963,858
		electrical components it necessarily includes pins. Chien discloses that the accelerator motion switches 2 are coupled to the microprocessor (the Intel 8408) by resolution setting pins. The state of the resolution setting pins (logical high or low) is determined by the switch coupled thereto (accelerator switches 2). Ex. B, at 1:53-65 (“In FIG. 3 showing the circuit diagram of the present invention, … two acceleration switches are positioned on it, thus enabling selection of three different types functions of accelerated transfer ratio… Accelerated motion switches 2 are each connected to respective terminals P13, P14 of output/input port #1. When neither switch is activated, P13 and P14 will each receive a low potential level (Logic signal "0").”); 2:50-56 (“In the present example, the data from the address of the relative schedule are: BYTE 2 the first switch is active BYTE 4 the second switch is active BYTE 6 both switchs are active.”); Fig. 3 (particularly, elements 2 and P13/P14); Fig. 4. The resolution setting pins in Chien’s preferred embodiment (shown in annotated Figure 3) are necessarily present so that the Intel 8048 is able to sense the change in voltage level of the signals affected by the switching circuit. The pins of the Intel 8048 are electrically connected to the switch assembly through port P1, specifically P13 and P14. The Intel 8048 microcomputer datasheet shows that P13 and P14 correspond to pins 30 and 31, respectively. The state of these pins sets the resolution value.
1C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the states of the resolution setting pins, setting a mouse resolution based on the resolution value	On information and belief, a person of ordinary skill in the art knows that all microcontrollers necessarily have multiple registers and that any parameter calculated or read by the microcontroller must be stored for some period of time in a register in the microcontroller. The program disclosed in Column 2 of Chien indicates that a register of the microcontroller is coupled to and receives data from the X-Y axis plan displacement detector and the switching circuit. The microcontroller sets mouse resolution (and stores it in a register) based on the

	’200 Claim Language	U.S. Patent No. 4,963,858
	and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	states of the resolution setting pins. The state of the resolution setting pins is determined by accelerator switches 2. *Id.*, at 2:1-43. The microcontroller in Chien’s preferred embodiment responds to signals from the X, Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer. *See*, Ex. B, at 1:53-61 (“In FIG. 3 showing the circuit diagram of the present invention, a 8048 used as CPU two acceleration switches are positioned on it, thus enabling selection of three different types functions of accelerated transfer ratio. Sliding of the mouse generates X and Y assembly signals which are input from the output/input port #1, the multiplied signals which transfer to CPU will be output from terminal P27 of output/input port #2.”); Fig. 3 (particularly, element “8048”). The amount the mouse moves on the screen is based on the resolution value stored in the register of the microcontroller. *Id.*, at 2:5-41; 1:53-61 (“In FIG. 3 showing the circuit diagram of the present invention, a 8048 used as CPU two acceleration switches are positioned on it, thus enabling selection of three different types functions of accelerated transfer ratio. Sliding of the mouse generates X and Y assembly signals which are input from the output/input port #1, the multiplied signals which transfer to CPU will be output from terminal P27 of output/input port #2.”); 3:10-26 (“A processor contained in housing 1 is responsive to the motion detection circuitry and to switches 2, 3 for supplying a stream for coordinate pair data in response to the measured sliding distances at least one of which is selectively multiplied by a predetermined constant in response to activation of the manual switches 2. … In accordance with the said procedures, the ratio of signal transfer will be change in accelerating to perform said advantage.”); 4:13-18 (“processing means for supplying a stream of coordinate pair data in response to said measured sliding distances at least one of which is selectively multiplied by a predetermined constant in response to activation of said manually

	’200 Claim Language	U.S. Patent No. 4,963,858
		activated switch means”).
2.	The apparatus as claimed in claim 1, further comprising a button set for clicking an icon selected by the mouse cursor.	Chien discloses a button set for clicking an icon selected by the mouse cursor. Id., at Fig. 2 (element 3); 1:50-53 (“FIG. 2 shows the physical appearance of the present invention including an acceleration switch for the changeable transfer ratio. The remaining three function keys 3 are of conventional design.”).
3.	The apparatus as claimed in claim 2, wherein the button set has a left button and a right button.	The button set of the mouse disclosed in Chien has a left and right button. Ex. B, at Fig. 2 (element 3).
4.	The apparatus as claimed in claim 1, wherein the switching circuit is configured on a lateral surface of the mouse.	The accelerator motion switches (element 2 in Chien’s mouse) correspond to the switching circuit and are located on a lateral surface of the mouse. Chien, at Fig. 2 (element 2).
6A	a X-Y plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	*See claim limitation 1A.*
6B	an N-stage switch for setting a resolution value, the N-stage switching circuit having a switching button capable of being manually switched to one of the positions 1 to N, and accordingly activating a	*See claim limitation 1B.* Chien discloses a system (*i.e.*, accelerator motion switches 2) with two resolution-setting switches and four possible resolution settings – neither switch active, first switch active, second switch active, and both switches active. Ex. B, at Fig. 3. Each individual resolution-setting switch is capable of being manually switched to one of two positions, and thus, each is an

	’200 Claim Language	U.S. Patent No. 4,963,858
	connected resolution setting pin to indicate a state, where N is a positive integer; and	N-stage switch with N=2. Ex. B, at Abstract (“The mouse includes at least one manually operable button for changing a ratio of distance of mouse movement across the planar surface to an amount of coordinate-data information value change.”); 1:16-19 (“The present invention relates to a changeable input ratio mouse including a switch location the mouse operable so that a signal input ratio can be changed responsible to a position of the switch.”); 1:53-65 (“In FIG. 3 showing the circuit diagram of the present invention, … two acceleration switches are positioned on it, thus enabling selection of three different types functions of accelerated transfer ratio… Accelerated motion switches 2 are each connected to respective terminals P13, P14 of output/input port #1. When neither switch is activated, P13 and P14 will each receive a low potential level (Logic signal "0").”); Fig. 3 (particularly, elements 2 and P13/P14); 2:50-56 (“In the present example, the data from the address of the relative schedule are: BYTE 2 the first switch is active BYTE 4 the second switch is active BYTE 6 both switches are active”). If the term “N-stage switch…” were construed to require a switch with two or more positions, and if the accelerated motion switches 2 in Chien were found not to constitute such a switch, it would have been obvious to include a single switch with more than two positions for setting a resolution value, like the slide switch for switching between 100, 200, 300 and 400 dpi scans in the OmniScan hand scanner. The use of multi-position switches was known in the art, as shown by, for example, the OmniScan hand scanner described in the December 7, 1993 issue of PC Magazine. The OmniScan hand scanner, which like a mouse, was a hand held computer attachment, is described as having a slide switch on the side of the scanner head for switching between 100, 200, 300 and 400 dpi scans. *Id.*, at p. 1. A person of ordinary skill in the art would have been motivated to modify the

	’200 Claim Language	U.S. Patent No. 4,963,858
		mouse of Chien to use a switch like the OmniScan hand scanner switch, rather than the combination of switches described in Chien, to the extent that users found it more convenient to use a different type of switch. A person of skill in the art would be further motivated to use a switch with multiple positions corresponding to specific mouse resolutions because such switches are well known, easy to use, compact in size, and commonly available.
6C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the state of the connected resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	*See claim limitation 1C.*
7.	The apparatus as claimed in claim 6,	*See claim limitation 2.*

	'200 Claim Language	**U.S. Patent No. 4,963,858**
	further comprising a button set for clicking an icon selected by the mouse cursor.	
8.	The apparatus as claimed in claim 7, wherein the button set has a left button and a right button.	*See claim limitation 3.*
9.	The apparatus as claimed in claim 6, wherein the N-stage switch is configured on a lateral surface of the mouse.	The accelerator motion switches (element 2 in Chien's mouse) correspond to the switching circuit and are located on a lateral surface of the mouse. Chien, at Fig. 2 (element 2).

Invalidity of Asserted Claims of U.S. Patent No. 7,532,200
Under 35 U.S.C. §§ 102(a),(b) and 103 by Japanese Utility Model Application No. JPY-H3-53322 ("Kimura")[1]

Based upon the claim interpretations Better Mouse Company, LLC ("BMC") appears to be asserting and the applications of those interpretations to Defendants' products in BMC's Infringement Contentions, **JPY-H3-53322** anticipates and/or renders obvious, alone or in combination with other prior art identified in Defendants' Invalidity Contentions, the asserted claims as described in part below. This invalidity claim chart is not an admission by Defendants that the accused products, including any current or past versions of these products, are covered by, or infringe these claims, particularly when they are properly construed. Nothing in these contentions should be interpreted as an acquiescence to or assertion of a particular claim construction by Defendants.

	'200 Claim Language	**JPY-H3-53322**
1.	1. An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	Kimura discloses an apparatus that sets multi-stage displacement resolution of a mouse. *See, e.g.*, p. 248 ("the present device provides an easy-to-operate mouse that is capable of suitably moving a cursor to a target by being provided with a selector switch for switching in at least three stages a ratio setting for the distance a cursor moves relative to a unit of travel distance of the mouse, and either speeding up or slowing down the rate of movement of the cursor by switching this switch").
1A	a X-Y axis plane displacement detector, for sensing a distance and a moving direction	Kimura discloses an X-Y axis plane displacement detector that senses the distance and moving direction of the mouse. *See, e.g.*, p. 248 (providing for "a rotation

[1] Japanese Utility Model Application No. JPY-H3-53322 to Kimura (filed March 20, 1985) ("Kimura"). Because Kimura was published on November 21, 1991, which was well before the January 18, 2005, filing date of U.S. Patent No. 7,532,200 ("the '200 Patent"), Kimura constitutes prior art under 35 U.S.C. §§ 102 (a) and (b). To the extent that Kimura is found not to anticipate one or more claims of the '200 Patent under 35 U.S.C. §102, Kimura renders those claims obvious under 35 U.S.C. §103 when combined with other art identified in Defendants' Invalidity Contentions. It would have been obvious to combine the teachings of Kimura with other art identified in Defendants' Invalidity Contentions at least because the references all pertain to setting multi-stage displacement resolution of a computer mouse directly through a switch on the mouse.

	’200 Claim Language	JPY-H3-53322
	generated by the mouse in a two-dimensional space;	detection sensor for detecting an amount of rotation of the ball [contained inside the main unit of the mouse] in the directions of the x-axis and the y-axis and outputting a number of pulses corresponding to an amount of movement of the main unit in the direction of the x-axis and the y-axis….”).
1B	a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to generate the resolution value directly, each switch being coupled to a resolution setting pin, each resolution setting pin having a state determined by the switch coupled thereto; and	Kimura discloses a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to generate the resolution value directly. *See, e.g.*, p. 248 (the “selector switch [is] capable of being switched in at least three stages, and a conversion part, which, based on the three-way switching of the selector switch, converts the number of output pulses of the rotation detection sensor to m-times the number of pulses for a fast mode, one-times the number of pulses for a normal mode, and 1/n-times the number [of] pulses for a slow mode, and outputs the converted number of pulses to a counter…”). The selector switch contemplated in Kimura is adjusted manually, and the switching circuit changes the mouse resolution directly because it does not require use of a software driver/tool running on a computer to which the mouse is connected. *See id*. (“In the main unit 2, there is provided trigger switches 3 and 4, which are formed using push-button switches, and a three-way switchable selector switch [5] … and these switches 3, 4, 5 are provided in locations which, when the main unit 2 is grasped by hand, can be [] operated by being pressed using the thumb, index finger and middle finger.”). On information and belief, the mouse microprocessor disclosed in Kimura must have “pins.” Pins are necessary for an integrated circuit such as a microcontroller to electrically interface with other electrical components and/or a circuit board. Since the microcontroller of Kimura electrically interfaces with several other electrical components, it necessarily includes pins.

	’200 Claim Language	JPY-H3-53322
1C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the states of the resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	On information and belief, a person of ordinary skill in the art knows that all microcontrollers necessarily have multiple registers and that any parameter calculated or read by the microcontroller must be stored for some period of time in a register in the microcontroller. Kimura discloses a microcontroller that sets mouse resolution (and stores it in a register) by converting the number of output pulses of the rotation detection sensor based on the states of the resolution setting pins. The states of the resolution setting pins are determined by the sensitivity selector switch 5. Kimura further discloses that the mouse micro controller responds to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register. *See, e.g.*, p.248 (“A rotary encoder 6 is provided in the main unit 2 as a rotation detection sensor … and [for] outputting data on the amount of movement in the x-axis direction and in the y-axis direction, and, in addition, a microprocessing unit (MPU) 7 is provided a computation/control part linked to the output side of the rotary encoder 6. The MPU 7 is linked to a personal computer 8, and comprises a control part, which, based on pressure signals from the trigger switches 3 and 4, outputs a command signal for specifying a menu on the display screen of the personal computer 8, and, in addition, comprises a conversion/control part 11, which, when a switching element 10 of a common terminal 9 side of the selector switch 5 is connected to a fast mode terminal F, a normal mode terminal N, and a slow mode terminal S, respectively, converts and outputs amount-of-movement data inputted from the rotary encoder 6 to the common terminal 9 of the selector switch 5 m times (where m = 2, 3, 4, …), one time, or 1/n times (where n = 2, 3, 4, …)”).

	'200 Claim Language	**JPY-H3-53322**
2.	The apparatus as claimed in claim 1, further comprising a button set for clicking an icon selected by the mouse cursor.	Kimura discloses a button set for clicking an icon selected by the mouse cursor. *See* Fig. 2; p. 248 ("In the main unit 2, there is provided trigger switches 3 and 4, which are formed using push-button switches, and a three-way switchable selector switch [5] … and these switches 3, 4, 5 are provided in locations which, when the main unit 2 is grasped by hand, can be [] operated by being pressed using the thumb, index finger and middle finger.").
3.	The apparatus as claimed in claim 2, wherein the button set has a left button and a right button.	Kimura discloses that the button set has a left button and a right button such that the user can operate it by using his or her index finger and middle finger. *See* Fig. 2; p. 248 ("In the main unit 2, there is provided trigger switches 3 and 4, which are formed using push-button switches, and a three-way switchable selector switch [5] … and these switches 3, 4, 5 are provided in locations which, when the main unit 2 is grasped by hand, can be [] operated by being pressed using the thumb, index finger and middle finger.").
4.	The apparatus as claimed in claim 1, wherein the switching circuit is configured on a lateral surface of the mouse.	Kimura discloses that the three-way switchable selector switch is configured on a lateral surface of the mouse such that the user can operate it using his or her thumb. *See* Fig. 2; p. 248 ("In the main unit 2, there is provided trigger switches 3 and 4, which are formed using push-button switches, and a three-way switchable selector switch [5] … and these switches 3, 4, 5 are provided in locations which, when the main unit 2 is grasped by hand, can be [] operated by being pressed using the thumb, index finger and middle finger.").

	’200 Claim Language	JPY-H3-53322
6A	a X-Y plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	*See claim limitation 1A.*
6B	an N-stage switch for setting a resolution value, the N-stage switching circuit having a switching button capable of being manually switched to one of the positions 1 to N, and accordingly activating a connected resolution setting pin to indicate a state, where N is a positive integer; and	*See claim limitation 1B.* Kimura discloses a three-stage sensitivity selector switch for a setting a resolution value that is fast, normal, or slow, and accordingly activating a connected resolution setting pin to indicate a resolution state. *See, e.g.*, p. 248 (the “selector switch [is] capable of being switched in at least three stages, and a conversion part, which, based on the three-way switching of the selector switch, converts the number of output pulses of the rotation detection sensor to m-times the number of pulses for a fast mode, one-times the number of pulses for a normal mode, and 1/n-times the number [of] pulses for a slow mode, and outputs the converted number of pulses to a counter…”). Accordingly, Kimura discloses an N-stage switch capable of being switched to one of positions 1 to N, where N is three.
6C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the state of the connected resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane	*See claim limitation 1C.*

	'200 Claim Language	**JPY-H3-53322**
	displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	
7.	The apparatus as claimed in claim 6, further comprising a button set for clicking an icon selected by the mouse cursor.	*See claim limitation 2.*
8.	The apparatus as claimed in claim 7, wherein the button set has a left button and a right button.	*See claim limitation 3.*
9.	The apparatus as claimed in claim 6, wherein the N-stage switch is configured on a lateral surface of the mouse.	Kimura discloses that the three-way switchable selector switch is configured on a lateral surface of the mouse such that the user can operate it using his or her thumb. *See* Fig. 2; p. 248 ("In the main unit 2, there is provided trigger switches 3 and 4, which are formed using push-button switches, and a three-way switchable selector switch [5] … and these switches 3, 4, 5 are provided in locations which, when the main unit 2 is grasped by hand, can be [] operated by being pressed using the thumb, index finger and middle finger.").

Invalidity of Asserted Claims of U.S. Patent No. 7,532,200
Under 35 U.S.C. §§ 102(a),(b) and 103 by Japanese Patent Application No. JPA-H3-278219 ("Mihara")[1]

Based upon the claim interpretations Better Mouse Company, LLC ("BMC") appears to be asserting and the applications of those interpretations to Defendants' products in BMC's Infringement Contentions, **JPA-H3-278219** anticipates and/or renders obvious, alone or in combination with other prior art identified in Defendants' Invalidity Contentions, the asserted claims as described in part below. This invalidity claim chart is not an admission by Defendants that the accused products, including any current or past versions of these products, are covered by, or infringe these claims, particularly when they are properly construed. Nothing in these contentions should be interpreted as an acquiescence to or assertion of a particular claim construction by Defendants.

	'200 Claim Language	**JPA-H3-278219**
1.	1. An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	Mihara discloses an apparatus that sets multi-stage displacement resolution of a mouse. *See, e.g.*, p. 121 ("An object of the present invention is to provide a mouse that enables the sensitivity of the mouse to be easily switched at two or more levels using a sensitivity adjustment switch provided in the mouse.").
1A	a X-Y axis plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	Mihara discloses an X-Y axis plane displacement detector that senses the distance and moving direction of the mouse. *See, e.g.*, p. 122 ("The mouse travel distance and direction are detected by the rotation of a ball 4 being communicated to the rotary encoders 6, 8 through the rotation of rollers 5, 7, and resolved in the x-axis

[1] Japanese Patent Application No. JPA-H3-278219 to Mihara (filed March 28, 1990) ("Mihara"). Because Mihara was published on December 9, 1991, which was well before the January 18, 2005, filing date of U.S. Patent No. 7,532,200 ("the '200 Patent"), Mihara constitutes prior art under 35 U.S.C. §§ 102 (a) and (b). To the extent that Mihara is found not to anticipate one or more claims of the '200 Patent under 35 U.S.C. §102, Mihara renders those claims obvious under 35 U.S.C. §103 when combined with other art identified in Defendants' Invalidity Contentions. It would have been obvious to combine the teachings of Mihara with other art identified in Defendants' Invalidity Contentions at least because the references all pertain to setting multi-stage displacement resolution of a computer mouse directly through a switch on the mouse.

	’200 Claim Language	JPA-H3-278219
		direction and the y-axis direction.”).
1B	a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to generate the resolution value directly, each switch being coupled to a resolution setting pin, each resolution setting pin having a state determined by the switch coupled thereto; and	Mihara discloses a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to generate the resolution value directly. *See, e.g.*, p.122 (“it [is] possible to adjust mouse sensitivity at three levels, i.e., high, medium, and low, by simultaneously switching x-axis and y-axis outputs using a two-throw sensitivity adjustment switch 2”). The switching circuit contemplated in Mihara changes the mouse resolution directly because it does not require use of a software driver/tool running on a computer to which the mouse is connected. *See id*. (“the present invention achieves effects that make it possible to switch the ratio of the amount of movement of the mouse to the amount of movement of the cursor on the host computer CRT without changing software”). On information and belief, the mouse microprocessor disclosed in Mihara must have “pins.” Pins are necessary for an integrated circuit such as a microcontroller to electrically interface with other electrical components and/or a circuit board. Since the microcontroller of Mihara electrically interfaces with several other electrical components, it necessarily includes pins.
1C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the states of the resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the	On information and belief, a person of ordinary skill in the art knows that all microcontrollers necessarily have multiple registers and that any parameter calculated or read by the microcontroller must be stored for some period of time in a register in the microcontroller. Mihara discloses a microcontroller that sets mouse resolution (and stores it in a register) based on the states of the resolution setting pins. The states of the resolution setting pins are determined by the sensitivity adjustment switch 2. Mihara further discloses that the mouse micro controller responds to the distance and moving direction sensed by the X-Y axis

	’200 Claim Language	JPA-H3-278219
	register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register. *See, e.g.*, p.122 (describing a mouse that “includes two-frequency dividers 9A and 10A and three-frequency dividers 9B and 10B for the respective outputs of rotary encoders 6 and 8, and makes it possible to adjust mouse sensitivity at three levels, i.e., high, medium, and low, by simultaneously switching x-axis and y-axis outputs using a two-throw sensitivity adjustment switch 2. The mouse travel distance and direction are detected by the rotation of a ball 4 being communicated to the rotary encoders 6, 8 through the rotation of rollers 5, 7, and resolved in the x-axis direction and the y-axis direction. The outputs of the rotary encoders 6, 8 are connected to the inputs of two sets of frequency dividers 9A, 10A and 9B, 10B, and to one terminal of the sensitivity adjustment switch 2, and when the sensitivity adjustment switch 2 is set up to low sensitivity, the output of the pulses of the rotary encoders 6, 8 are sent to the host computer by way of an interface cable 1 after being divided by three, when set to medium sensitivity, the output pulses are sent after being divided by two, and when set to high sensitivity, the output pulses are sent as-is”) (“the present invention achieves effects that make it possible to switch the ratio of the amount of movement of the mouse to the amount of movement of the cursor on the host computer CRT without changing software”).
2.	The apparatus as claimed in claim 1, further comprising a button set for clicking an icon selected by the mouse cursor.	Mihara discloses a button set for clicking an icon selected by the mouse cursor. *See* Fig. 1; *see also* p. 122 (“The two mouse switches 3 are for inputting instructions for starting and stopping pointing [the cursor].”)

	'200 Claim Language	**JPA-H3-278219**
3.	The apparatus as claimed in claim 2, wherein the button set has a left button and a right button.	Mihara discloses that the button set has a left button and a right button. *See* Fig. 1; *see also* p. 122 ("The two mouse switches 3 are for inputting instructions for starting and stopping pointing [the cursor].")
4.	The apparatus as claimed in claim 1, wherein the switching circuit is configured on a lateral surface of the mouse.	Mihara discloses that the sensitivity adjustment switch is configured on a lateral surface of the mouse. *See* Fig. 1.
6A	a X-Y plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	*See claim limitation 1A.*
6B	an N-stage switch for setting a resolution value, the N-stage switching circuit having a switching button capable of being manually switched to one of the positions 1 to N, and accordingly activating a connected resolution setting pin to indicate a state, where N is a positive integer; and	*See claim limitation 1B.* Mihara discloses a three-stage sensitivity control switch for a setting a resolution value that is low, medium, or high, and accordingly activating a connected resolution setting pin to indicate a resolution state. *See, e.g.*, p.122 ("when the sensitivity adjustment switch 2 is set up to low sensitivity, the output of the pulses of the rotary encoders 6, 8 are sent to the host computer by way of an interface cable 1 after being divided by three, when set to medium sensitivity, the output pulses are sent after being divided by two, and when set to high sensitivity, the output pulses are sent as-is"). Further, Mihara provides that the frequency dividers may be "three sets or more, and the number of frequency divisions may be an integer value of four or more." *See id*. Accordingly, Mihara discloses an N-stage switch capable of being switched to one of positions 1 to N, where N is at least three.

	’200 Claim Language	JPA-H3-278219
6C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the state of the connected resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	*See claim limitation 1C.*
7.	The apparatus as claimed in claim 6, further comprising a button set for clicking an icon selected by the mouse cursor.	*See claim limitation 2.*
8.	The apparatus as claimed in claim 7, wherein the button set has a left button and a right button.	*See claim limitation 3.*

	'200 Claim Language	**JPA-H3-278219**
9.	The apparatus as claimed in claim 6, wherein the N-stage switch is configured on a lateral surface of the mouse.	Mihara discloses that the sensitivity adjustment switch is configured on a lateral surface of the mouse. *See* Fig. 1.

Invalidity of Asserted Claims of U.S. Patent No. 7,532,200
Under 35 U.S.C. §§ 102(b) and 103 by U.S. Patent No. 5,119,077 to Giorgio ("Giorgio")[1]

Based upon the claim interpretations Better Mouse Company, LLC ("BMC") appears to be asserting and the applications of those interpretations to Defendants' products in BMC's Infringement Contentions, **U.S. Patent No. 5,119,077** anticipates and/or renders obvious, alone or in combination with other prior art identified in Defendants' Invalidity Contentions, the asserted claims as described in part below. This invalidity claim chart is not an admission by Defendants that the accused products, including any current or past versions of these products, are covered by, or infringe these claims, particularly when they are properly construed. Nothing in these contentions should be interpreted as an acquiescence to or assertion of a particular claim construction by Defendants.

	'200 Claim Language	**U.S. Patent No. 5,119,077**
1.	1. An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	Giorgio discloses an apparatus that sets the multi-stage displacement resolution of a mouse. *See* Ex. C, at Abstract ("An improved computer mouse allows a computer operator to interactively adjust horizontal and vertical resolution by depressing switches on the mouse frame and moving the mouse frame on a flat surface."); *see also, generally*, 2:36-3:27.
1A	a X-Y axis plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	Giorgio discloses an X-Y axis plane displacement detector that senses the distance and moving direction of the mouse. In Giorgio, the displacement detector is a ball mechanically-coupled (using means "well known in the art") to two optical or mechanical encoders that produce output signals indicative of movement of the

[1] U.S. Patent No. 5,119,077 to Giorgio ("Giorgio") issued on June 2, 1992, well before the January 18, 2005, filing date of U.S. Patent No. 7,532,200 ("the '200 Patent"). Accordingly, Giorgio constitutes prior art under 35 U.S.C. §§ 102(b). To the extent that Giorgio is found not to anticipate one or more claims of the '200 Patent under 35 U.S.C. §102, Giorgio renders those claims obvious under 35 U.S.C. §103 when combined with other art identified in Defendants' Invalidity Contentions (*e.g.*, the OmniScan hand scanner described in the December 7, 1993 issue of PC Magazine ("OmniScan"). It would have been obvious to combine the teaching of Giorgio with other art identified in Defendants' Invalidity Contentions at least because the references all pertain to setting multi-stage displacement resolution of a computer mouse directly through a switch on the mouse.

	’200 Claim Language	U.S. Patent No. 5,119,077
		ball 18 in any one of four directions. *Id.*, at 3:50-58 (“A ball 18 is mechanically coupled to two optical or mechanical encoders 19a and 19b that produce output signals on respective lines 20 and 24 indicative of movement of the ball 18 in any one of four directions. The means of mechanically coupling the ball to two optical or mechanical encoders 19a and 19b is well known in the art. The output signals on lines 20 and 24 emanating from these encoders 19a and 19b are a result of the movement of ball 18.”).
	a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to generate the resolution value directly, each switch being coupled to a resolution setting pin, each resolution setting pin having a state determined by the switch coupled thereto; and	Giorgio discloses a switching circuit for setting a resolution value. In Giorgio’s preferred embodiment, the switching circuit comprises two single pole double throw switches coupled to signal lines. The switches (element 12) and the signal lines (elements 14a-14d) are shown in Figure 1. In Giorgio’s preferred embodiment, when both switches are depressed, and the mouse is moved, the microprocessor adjusts the resolution of the mouse. *Id.*, at 7:28-35 (“As long as switches 12 are depressed and mouse 10 continues to move a distance greater than the value stored by the internal A/D register, resolution adjustments are continuously made. The sequence would start with normal resolution, followed by high resolution, followed by very high resolution, followed by very low resolution, followed by low resolution, followed by normal resolution, etc…”). In the preferred embodiment of Giorgio, the switching circuit includes multiple switches that can be manually adjusted. *Id.*, at 5:20-22 (“Switch assembly 12 comprises two single pole double throw (SPDT) switches…”). The switching circuit in Giorgio is designed to adjust resolution directly – *i.e.*, without having to also manipulate a software driver/tool. *Id.*, at 3:3-6 (“According to the present invention, a computer operator depresses the switches on the computer mouse and moves the frame of the computer mouse, thereby adjusting the resolution of the X,

	’200 Claim Language	U.S. Patent No. 5,119,077
		Y encoders.”) On information and belief, the mouse microprocessor disclosed in Giorgio must have “pins.” As discussed above, pins are necessary for an integrated circuit such as a microcontroller to electrically interface with other electrical components and/or a circuit board. Since the microcontroller shown in Figure 1 of Giorgio electrically interfaces with several other electrical components including a switch assembly and an X-Y displacement detector, the microcontroller of Figure 1 necessarily includes pins. Based on the schematic diagram of Figure 1 of Giorgio, a person of ordinary skill in the art would understand that the circuit of Figure 1 necessarily includes “resolution setting pins.” The pins at the interface between signal lines 14a - 14d are “resolution setting pins” in that they enable microcontroller 16 to sense changes in voltage level of these signals. *Id.*, at 5:22-28 (“When both of these switches 12 are depressed, signal lines 14A and 14C change from ground voltage to a +v voltage and signal lines 14B and 14D change from a +v voltage to a ground voltage. All four signal lines 14A through 14D are input to four input lines of microcontroller 16 which senses the change in the voltage levels of these signals.”).
1C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the states of the resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller	The preferred embodiment of Giorgio includes a microcontroller that is coupled both to the X-Y axis plane displacement detector and the switching circuit. This is shown in Figure 1. One of ordinary skill in the art would know that all microcontrollers necessarily have multiple registers. In Giorgio, the specific microcontroller example is the Motorola MC68HC11. One of ordinary skill in the art would know that the Motorola MC68HC11, like all microcontrollers, includes several registers. The switches 12 in Giorgio’s preferred embodiment determine the state of resolution setting pins. Giorgio further discloses that the “microcontroller 16 selects the next dynamic tracking parameter and stores this

	’200 Claim Language	U.S. Patent No. 5,119,077
	responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	parameter in internal RAM” (Col 6, lines 64-66). A person of ordinary skill in the art would understand that any parameter (or resolution value) calculated or read by the microcontroller must be stored for some period of time in a register in the microcontroller. On information and belief, it is not possible to store a parameter to RAM without first storing it in a register. The microcontroller in Giorgio’s preferred embodiment responds to signals from the X, Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer. *See id.*, at 1:19-24 (“The invention described herein relates to an improved computer mouse comprising a frame that houses a ball coupled to mechanical or optical encoders that, in combination, produce signals indicative of X (horizontal) and Y (vertical) movement as the frame is moved in any direction along a flat surface.”); 3:38-43 (“The invention incorporates industry standard switches for inputting signals to a computer for menu selection, item selection within a menu, etc., while the computer is normally executing commercial software programs such as Lotus 123, DBASE, Wordstar, or the like.”) The amount the cursor moves on the screen is based on the resolution value stored in the register of the microcontroller. *See id.*, at 1:33-37 (“In all prior art computer mouse assemblies, the resolution settings of the internal encoders are fixed; *i.e.*, moving the frame in a given direction for a fixed distance always results in the same number of output pulses or dots per inch (dpi).”); 3:3-14 (“According to the present invention, a computer operator depresses the switches on the computer mouse and moves the frame of the computer mouse, thereby adjusting the resolution of the X,Y encoders. … Adjustments are provided for very low resolution, low resolution, normal resolution, high resolution, and very high resolution. Each resolution setting provides a different ‘dpi’ or dots per inch

	’200 Claim Language	U.S. Patent No. 5,119,077
		output.”)
2.	The apparatus as claimed in claim 1, further comprising a button set for clicking an icon selected by the mouse cursor.	Giorgio discloses an “improved industry standard computer mouse.” A person of ordinary skill in the art would understand that an “industry standard computer mouse” includes two buttons, a left button and a right button (*i.e.*, a “button set”), for “clicking an icon selected by the mouse cursor.” *Id.*, at 2:37-51; 7:63-65. To the extent a mouse with a “button set for clicking an icon” was not disclosed in Giorgio, it would have been obvious to incorporate a button set like that disclosed in Chien. *See* Chien, at Fig. 2. A person of skill in the art would have been motivated to use a mouse with left and right buttons because it is a practical, convenient, and standard mouse configuration and because it would conform to existing devices and therefore consumer expectations.
3.	The apparatus as claimed in claim 2, wherein the button set has a left button and a right button.	Giorgio discloses an “improved industry standard computer mouse.” A person of ordinary skill in the art would understand that an “industry standard computer mouse” includes two buttons, a left button and a right button (*i.e.*, a “button set”), for “clicking an icon selected by the mouse cursor.” *Id.*, at 2:37-51; 7:63-65. To the extent a mouse with a “button set for clicking an icon” was not disclosed in Giorgio, it would have been obvious to incorporate a button set like that disclosed in Chien. *See* Chien, at Fig. 2. A person of skill in the art would have been motivated to use a mouse with left and right buttons because it is a practical, convenient, and standard mouse configuration and because it would conform to

	’200 Claim Language	U.S. Patent No. 5,119,077
		existing devices and therefore consumer expectations.
4.	The apparatus as claimed in claim 1, wherein the switching circuit is configured on a lateral surface of the mouse.	In the preferred embodiment of Giorgio, the switching circuit includes multiple switches that are designed to be manually adjusted. To the extent the manually adjustable switches were found not to be configured on a lateral side of a mouse, Chien discloses a mouse with a “changeable input ratio” (Chien, at 1:7-8) where when two switches positioned on the lateral frame of the mouse are pressed, a microprocessor in the mouse multiplies the sliding dance by a predetermined constant. *Id.*, at 3:10-16. It would have been obvious to position switches like those disclosed in Giorgio “on a lateral surface of the mouse,” as taught by Chien. A mouse designer has freedom to place switches wherever is most convenient for the user. Placing the resolution setting switch on a lateral surface of the mouse is obvious. A person of skill in the art would have been motivated to place a switch on a lateral surface of the mouse so that users are not confused with the mouse’s normal operation buttons and so that the resolution setting buttons are not depressed accidentally.
6A	a X-Y plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	*See claim limitation 1A.*
6B	an N-stage switch for setting a resolution value, the N-stage switching circuit having a switching button capable of being manually switched to one of the positions 1 to N, and accordingly activating a	*See claim limitation 1B.* The switch assembly 12 disclosed in the preferred embodiment of Giorgio meets this requirement because it has at least two possible positions (*e.g.*, “BOTH SWITCHES 12 DEPRESSED? – YES” or “BOTH SWITCHES 12 DEPRESSED? – NO”). *See id.*, Fig. 2; 7:14-31. Giorgio’s switches are capable of being switched from a not-depressed position to a

	’200 Claim Language	U.S. Patent No. 5,119,077
	connected resolution setting pin to indicate a state, where N is a positive integer; and	depressed position. *See, e.g., id.*, at 3:3-6; 5:20-22. In addition Giorgio states: “[T]he preferred embodiment, as disclosed, uses a two switch computer mouse. Other embodiments are possible using a different number of switches.” Ex. B, at 7:61-66. If the term “N-stage switch…” were construed to require a switch with two or more positions, and if the accelerated motion switches 2 in Giorgio were found not to constitute such a switch, it would have been obvious to include a single switch with more than two positions for setting a resolution value, like the slide switch for switching between 100, 200, 300 and 400 dpi scans in the OmniScan hand scanner. The use of multi-position switches was known in the art, as shown by, for example, the OmniScan hand scanner described in the December 7, 1993 issue of PC Magazine. The OmniScan hand scanner, which like a mouse, was a hand held computer attachment, is described as having a slide switch on the side of the scanner head for switching between 100, 200, 300 and 400 dpi scans. *Id.*, at p. 1. A person of ordinary skill in the art would have been motivated to modify the mouse of Giorgio to use a switch like the OmniScan hand scanner switch, rather than the combination of switches described in Giorgio, to the extent that users found it more convenient to use a different type of switch. A person of skill in the art would be further motivated to use a switch with multiple positions corresponding to specific mouse resolutions because such switches are well known, easy to use, compact in size, and commonly available.
6C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the state of the	*See claim limitation 1C.*

	’200 Claim Language	U.S. Patent No. 5,119,077
	connected resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	
7.	The apparatus as claimed in claim 6, further comprising a button set for clicking an icon selected by the mouse cursor.	*See claim limitation 2.*
8.	The apparatus as claimed in claim 7, wherein the button set has a left button and a right button.	*See claim limitation 3.*
9.	The apparatus as claimed in claim 6, wherein the N-stage switch is configured on a lateral surface of the mouse.	In the preferred embodiment of Giorgio, the switching circuit includes multiple switches that are designed to be manually adjusted. To the extent the manually adjustable switches were found not to be configured on a lateral side of a mouse, Chien discloses a mouse with a “changeable input ratio” (Chien, at 1:7-8) where

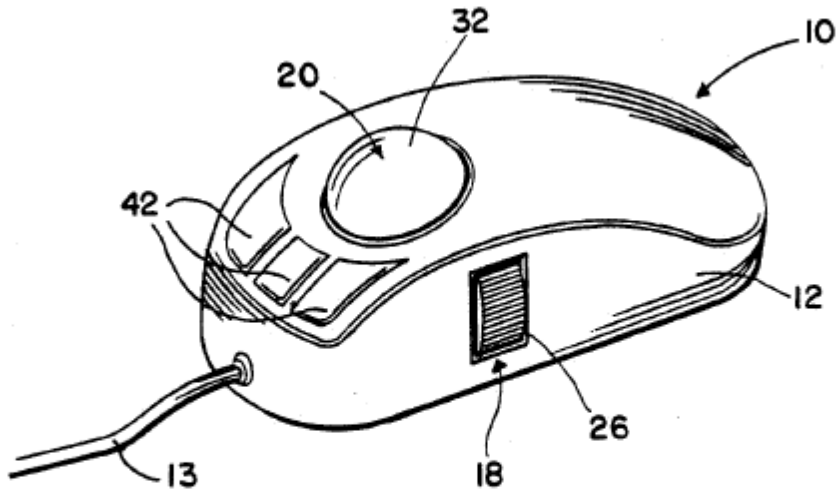
	’200 Claim Language	U.S. Patent No. 5,119,077
		when two switches positioned on the lateral frame of the mouse are pressed, a microprocessor in the mouse multiplies the sliding dance by a predetermined constant. *Id.*, at 3:10-16. It would have been obvious to position switches like those disclosed in Giorgio “on a lateral surface of the mouse,” as taught by Chien. A mouse designer has freedom to place switches wherever is most convenient for the user. Placing the resolution setting switch on a lateral surface of the mouse is obvious. A person of skill in the art would have been motivated to place a switch on a lateral surface of the mouse so that users are not confused with the mouse’s normal operation buttons and so that the resolution setting buttons are not depressed accidentally.

Invalidity of U.S. Patent No. 7,532,200 by U.S. Patent No. 5,298,919 ("Chang")

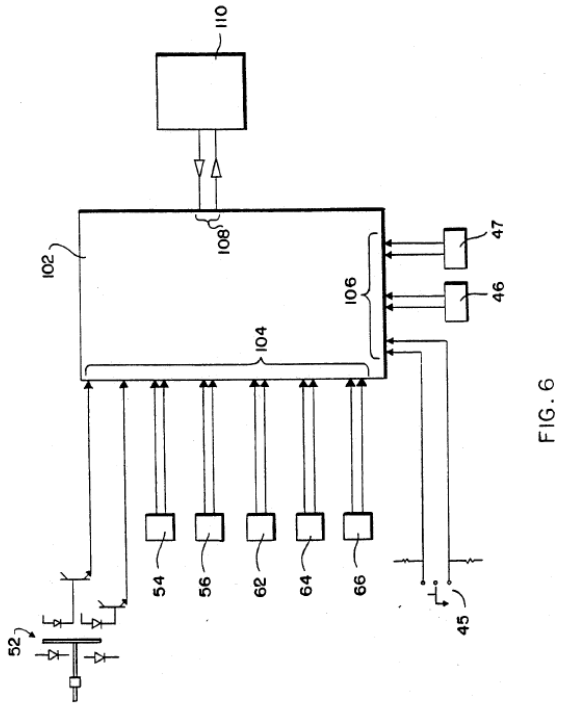
Based upon the claim interpretations Better Mouse Company, LLC ("BMC") appears to be asserting and the applications of those interpretations to Defendants' products in BMC's Infringement Contentions, U.S. Patent No. 5,298,919 issued on March 29, 1994 ("Chang") anticipates and/or renders obvious, alone or in combination with other prior art identified in Defendants' Invalidity Contentions, the asserted claims as described in part below. This invalidity claim chart is not an admission by Defendants that the accused products, including any current or past versions of these products, are covered by, or infringe these claims, particularly when they are properly construed. Nothing in these contentions should be interpreted as an acquiescence to or assertion of a particular claim construction by Defendants.

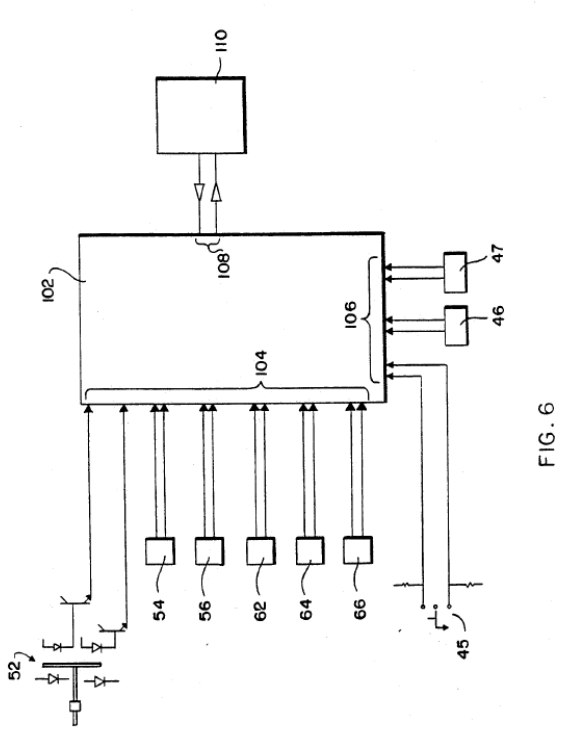
	'200 Claim Language	**Disclosure**
1.	1. An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	*To the extent the preamble is considered to limit the claim, Chang discloses an apparatus that sets the multi-stage displacement resolution of a mouse.* *See, e.g.*, Abstract.
1A	a X-Y axis plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	*Chang discloses an X-Y axis plane displacement detector that senses the distance and moving direction of the mouse.* *See, e.g.*, 1:15-30; 4:60-68; 5:12-64; 6:26-39; 6:65-7:6; 12:36-54; 5:12-14 ("Two encoders 52, 54 are associated with the roller ball 22, one for the x translational coordinate and one for the y translational coordinate.")

Invalidity of U.S. Patent No. 7,532,200 by U.S. Patent No. 5,298,919 ("Chang")

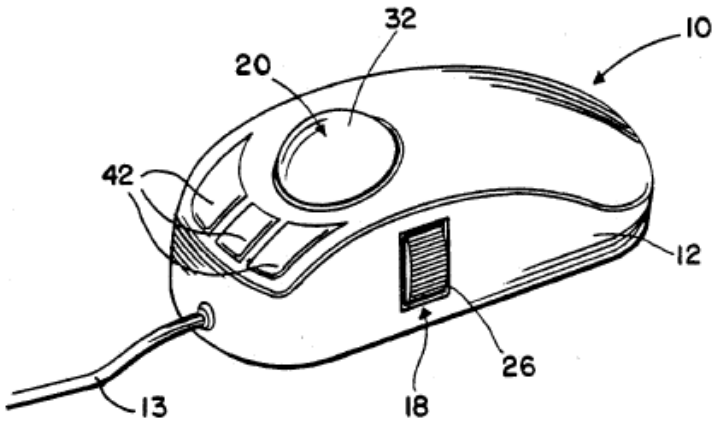
	'200 Claim Language	Disclosure
		 FIG. 1

Invalidity of U.S. Patent No. 7,532,200 by U.S. Patent No. 5,298,919 ("Chang")

	'200 Claim Language	Disclosure
		 FIG. 6
1B	a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to generate the resolution value directly, each switch being coupled to a resolution setting pin, each resolution setting pin having a state determined by the switch coupled thereto; and	*Chang discloses a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to generate the resolution value directly, each switch being coupled to a resolution setting pin, each resolution setting pin having a state determined by the switch coupled thereto.* *See, e.g.*, 4:38-50; 6:60-7:12; 9:17-30; 6:61-64 ("Buttons 42 operate switches 45, 46, 47 mounted on the base 14. The switches activate various software functions such as are conventionally found on

	’200 Claim Language	Disclosure
		mouse input devices.")  FIG. 6
1C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the states of the resolution setting pins, setting a mouse	*Chang discloses a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the states of the resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a*

	'200 Claim Language	**Disclosure**
	resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	*control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.* *See, e.g.*, Fig. 6, 3:9-14; 5:38-45; 5:50-58; 6:65-8:13. 6:65-7:20 ("As set forth above, the signals from the encoder are transmitted to a controller 102, as shown in Fig. 6….")
2.	The apparatus as claimed in claim 1, further comprising a button set for clicking an icon selected by the mouse cursor.	*Chang discloses an apparatus as claimed in claim 1, further comprising a button set for clicking an icon selected by the mouse cursor.* *See, e.g.*, 1:30-45; 1:51-2:36. 1:36-45 ("Such indications are provided, for example, by icons displayed on the computer monitor which the user may choose by moving the cursor via movement of the mouse to the appropriate icon and pressing a button to choose that icon.")
3.	The apparatus as claimed in claim 2, wherein the button set has a left button and a right button.	*Chang discloses an apparatus as claimed in claim 2, wherein the button set has a left button and a right button.* *See, e.g.*, 2:58-3:2.

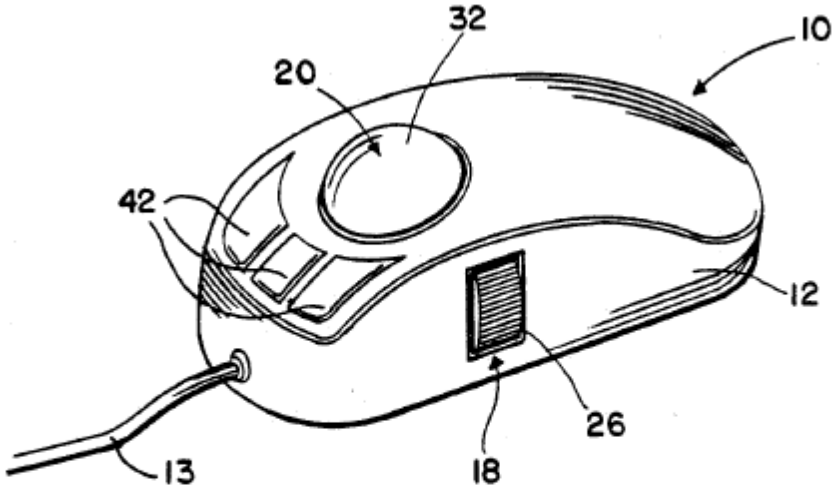
	'200 Claim Language	**Disclosure**
		 FIG. 1
4.	The apparatus as claimed in claim 1, wherein the switching circuit is configured on a lateral surface of the mouse.	*Chang discloses an apparatus as claimed in claim 1, wherein the switch is configured on a lateral surface of the mouse.*
6.	An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	*To the extent the preamble is considered to limit the claim, Chang discloses an apparatus for setting multi-stage displacement resolution of a mouse.*

Invalidity of U.S. Patent No. 7,532,200 by U.S. Patent No. 5,298,919 ("Chang")

	'200 Claim Language	Disclosure
		See claim limitation 1.
6A	a X-Y plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	*Chang discloses a X-Y plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space.* *See claim limitation 1A.*
6B	an N-stage switch for setting a resolution value, the N-stage switching circuit having a switching button capable of being manually switched to one of the positions 1 to N, and accordingly activating a connected resolution setting pin to indicate a state, where N is a positive integer; and	*Chang discloses an N-stage switch for setting a resolution value, the N-stage switching circuit having a switching button capable of being manually switched to one of the positions 1 to N, and accordingly activating a connected resolution setting pin to indicate a state, where N is a positive integer.* *See claim limitation 1B.*
6C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the state of the connected resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor	*Chang discloses a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the state of the connected resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.* *See claim limitation 1C.*

	'200 Claim Language	**Disclosure**
	on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	
7.	The apparatus as claimed in claim 6, further comprising a button set for clicking an icon selected by the mouse cursor.	*Chang discloses an apparatus as claimed in claim 6, further comprising a button set for clicking an icon selected by the mouse cursor.* *See claim limitation 2.*
8.	The apparatus as claimed in claim 7, wherein the button set has a left button and a right button.	*Chang discloses an apparatus as claimed in claim 7, wherein the button set has a left button and a right button.* *See claim limitation 3.*
9.	The apparatus as claimed in claim 6, wherein the N-stage switch is configured on a lateral surface of the mouse.	*Chang discloses an apparatus as claimed in claim 6, wherein the N-stage switch is configured on a lateral surface of the mouse.*

Invalidity of U.S. Patent No. 7,532,200 by U.S. Patent No. 5,298,919 ("Chang")

	'200 Claim Language	Disclosure
		 FIG. 1 *See, e.g.*, 4:38-50; 5:65-6:14; 8:25-34; 9:3-16.

Invalidity of Asserted Claims of U.S. Patent No. 7,532,200
Under 35 U.S.C. §§ 102(a),(b) and 103 by Japanese Patent Application No. JPA-H8-123615 ("Wa")[1]

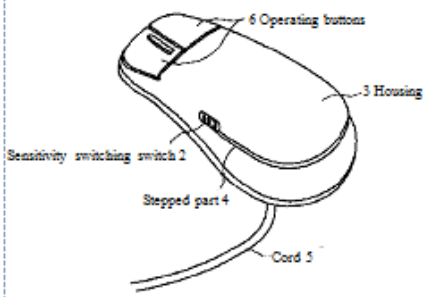
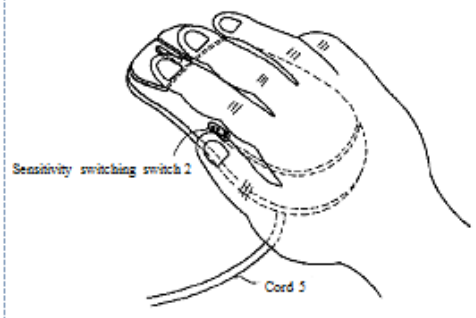
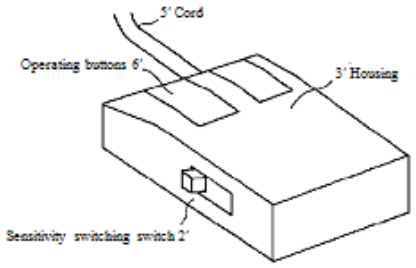
Based upon the claim interpretations Better Mouse Company, LLC ("BMC") appears to be asserting and the applications of those interpretations to Defendants' products in BMC's Infringement Contentions, **JPA-H8-123615** anticipates and/or renders obvious, alone or in combination with other prior art identified in Defendants' Invalidity Contentions, the asserted claims as described in part below. This invalidity claim chart is not an admission by Defendants that the accused products, including any current or past versions of these products, are covered by, or infringe these claims, particularly when they are properly construed. Nothing in these contentions should be interpreted as an acquiescence to or assertion of a particular claim construction by Defendants.

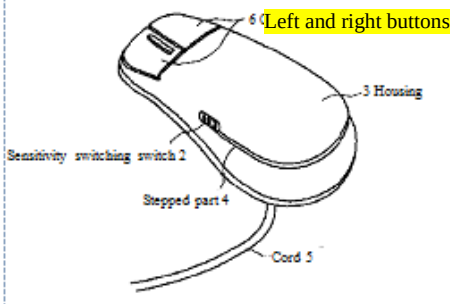
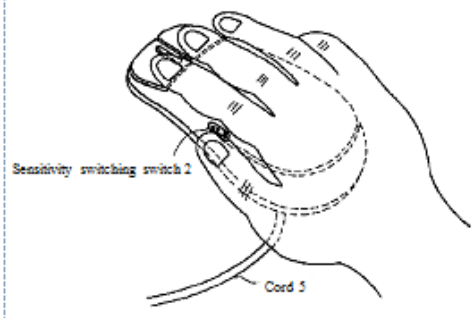
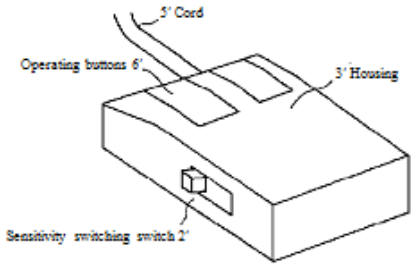
	'200 Claim Language	**JPA-H8-123615**
1.	1. An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	Wa discloses an apparatus that sets multi-stage displacement resolution of a mouse. *See, e.g.*, p. 1, ¶ 57 ("The invention relates to a mouse 1 with a ***sensitivity switching switch function,*** being a mouse (a hand-held position input device which is manipulated by moving over a surface) which is connected mainly to computers such as personal computers and is used for pointing by moving a mark displayed as an image, and provides a mouse 1 which not only is easy to manufacture, does not cause fatigue, has excellent operability and contributes to increased work efficiency, but also allows simultaneous sensitivity switching while manipulating the mouse.") (emphasis added). Wa describes the sensitivity

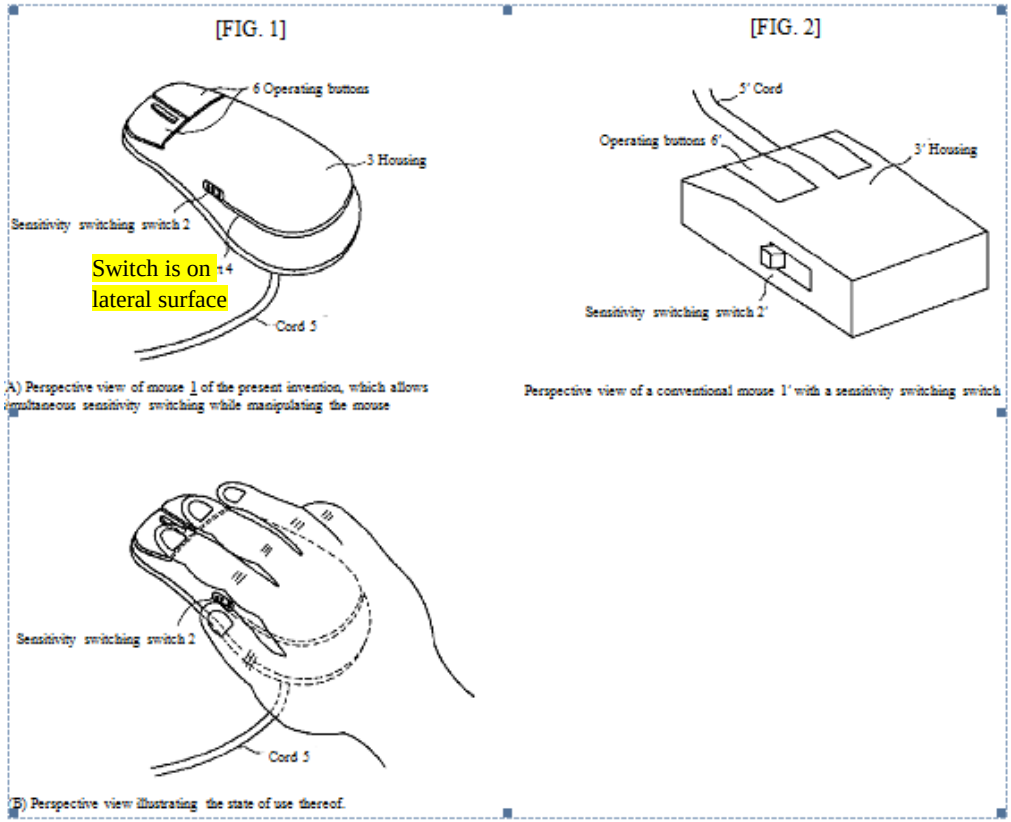
[1] Japanese Patent Application No. JPA-H8-123615 to Wa et al. (filed October 20, 1994) ("Wa") (citations are to the official translation concurrently submitted with this chart). Because Wa was published on May 17, 1996, which was well before the January 18, 2005, filing date of U.S. Patent No. 7,532,200 ("the '200 Patent"), Wa constitutes prior art under 35 U.S.C. §§ 102 (a) and (b). To the extent that Wa is found not to anticipate one or more claims of the '200 Patent under 35 U.S.C. §102, Wa renders those claims obvious under 35 U.S.C. §103 when combined with other art identified in Defendants' Invalidity Contentions (*e.g.*, the OmniScan hand scanner described in the December 7, 1993 issue of PC Magazine ("OmniScan"). It would have been obvious to combine the teaching of Wa with other art identified in Defendants' Invalidity Contentions at least because the references all pertain to setting multi-stage displacement resolution of a computer mouse directly through a switch on the mouse.

	’200 Claim Language	JPA-H8-123615
		switching function as “a function which makes the movement of the pointer on the screen of a personal computer faster or slower when the mouse is displaced by the same distance.” p. 2, ¶ 0002.
1A	a X-Y axis plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	Wa discloses an X-Y axis plane displacement detector that senses the distance and moving direction of the mouse. *See, e.g.*, ¶ 0001 (“The present invention relates to … a mouse (a hand-held position input device which is manipulated by moving over a surface) which is connected mainly to computers such as personal computers and is used for pointing by moving a mark displayed as an image….”)
1B	a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to generate the resolution value directly, each switch being coupled to a resolution setting pin, each resolution setting pin having a state determined by the switch coupled thereto; and	Wa discloses a switching circuit for setting a resolution value. *See, e.g.*, ¶ 0001 (“The invention relates to a mouse 1 with a sensitivity switching switch function….”) Wa describes the sensitivity switching function as “a function which makes the movement of the pointer on the screen of a personal computer faster or slower when the mouse is displaced by the same distance.” p. 2, ¶ 0002. Wa also discloses a switching circuit that includes multiple switches that can be manually adjusted to generate the resolution value directly. *See, e.g.*, ¶ 0004 (“…based on human engineering investigations, a stepped part 4 has been provided in the rear part of the mouse housing 3 so as to allow manipulation of the sensitivity switching switch 2 with the thumb.”) The switching circuit contemplated in Wa changes the mouse resolution directly because it does not require use of a software driver/tool running on a computer to which the mouse is connected. On information and belief, the mouse microprocessor disclosed in Wa must have “pins.” Pins are necessary for an integrated circuit such as a microcontroller to electrically interface with other electrical components and/or a circuit board. Since the microcontroller of Wa electrically interfaces with several other electrical components, it necessarily includes pins.

	'200 Claim Language	**JPA-H8-123615**
1C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the states of the resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	On information and belief, a person of ordinary skill in the art knows that all microcontrollers necessarily have multiple registers and that any parameter calculated or read by the microcontroller must be stored for some period of time in a register in the microcontroller. Wa discloses a microcontroller that sets mouse resolution (and stores it in a register) based on the states of the resolution setting pins. The states of the resolution setting pins are determined by the sensitivity switching switch 2. *See, e.g.*, ¶ 0004 ("…based on human engineering investigations, a stepped part 4 has been provided in the rear part of the mouse housing 3 so as to allow manipulation of the sensitivity switching switch 2 with the thumb.") Wa further discloses a mouse micro controller that responds to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register. *See, e.g.*, p. 2, ¶ 0002 (sensitivity switching "makes the movement of the pointer on the screen of a personal computer faster or slower when the mouse is displaced by the same distance").
2.	The apparatus as claimed in claim 1, further comprising a button set for clicking an icon selected by the mouse cursor.	Wa discloses that a user can "manipulate the operating buttons 6 with the index finger and middle finger." *See, e.g.*, ¶ 0004; Fig. 1.

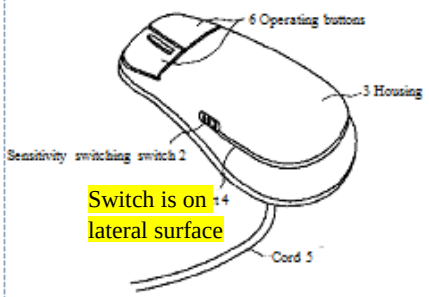
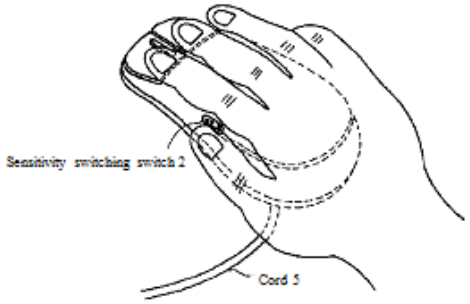
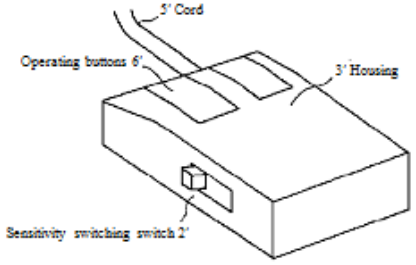
	’200 Claim Language	JPA-H8-123615
		[FIG. 1]  A) Perspective view of mouse 1 of the present invention, which allows simultaneous sensitivity switching while manipulating the mouse  B) Perspective view illustrating the state of use thereof. [FIG. 2]  Perspective view of a conventional mouse 1' with a sensitivity switching switch
3.	The apparatus as claimed in claim 2, wherein the button set has a left button and a right button.	Wa discloses a left and right button, stating that a user can “manipulate the operating buttons 6 with the index finger and middle finger.” *See, e.g.*, ¶ 0004; Fig. 1.

	’200 Claim Language	JPA-H8-123615
		[FIG. 1]  A) Perspective view of mouse 1 of the present invention, which allows simultaneous sensitivity switching while manipulating the mouse  B) Perspective view illustrating the state of use thereof. [FIG. 2]  Perspective view of a conventional mouse 1' with a sensitivity switching switch
4.	The apparatus as claimed in claim 1, wherein the switching circuit is configured on a lateral surface of the mouse.	Wa discloses “a stepped part 4 has been provided in the rear part of the mouse housing 3 so as to allow manipulation of the sensitivity switching switch 2 with the thumb. As is evident from the drawing, this makes it possible to manipulate the operating buttons 6 with the index finger and middle finger and to manipulate the sensitivity-switching switch 2 with the thumb while moving the mouse at the same

	’200 Claim Language	JPA-H8-123615
		time.” *See, e.g.*, ¶ 0004; Fig. 1. 
6A	a X-Y plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	*See claim limitation 1A.*

	’200 Claim Language	JPA-H8-123615
6B	an N-stage switch for setting a resolution value, the N-stage switching circuit having a switching button capable of being manually switched to one of the positions 1 to N, and accordingly activating a connected resolution setting pin to indicate a state, where N is a positive integer; and	*See claim limitation 1B.* If the term “N-stage switch…” were construed to require a switch with two or more positions, and if sensitivity switching switch 2 in Wa was found not to constitute such a switch, it would have been obvious to include a single switch with more than two positions for setting a resolution value, like the slide switch for switching between 100, 200, 300 and 400 dpi scans in the OmniScan hand scanner. The OmniScan hand scanner, which like a mouse, was a hand held computer attachment, is described as having a slide switch on the side of the scanner head for switching between 100, 200, 300 and 400 dpi scans. A person of ordinary skill in the art would have been motivated to modify the mouse of Wa to use a switch like the OmniScan hand scanner switch, to the extent that users found it more convenient to use a different type of switch. A person of skill in the art would be further motivated to use a switch with multiple positions corresponding to specific mouse resolutions because such switches are well known, easy to use, compact in size, and commonly available.
6C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the state of the connected resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control	*See claim limitation 1C.*

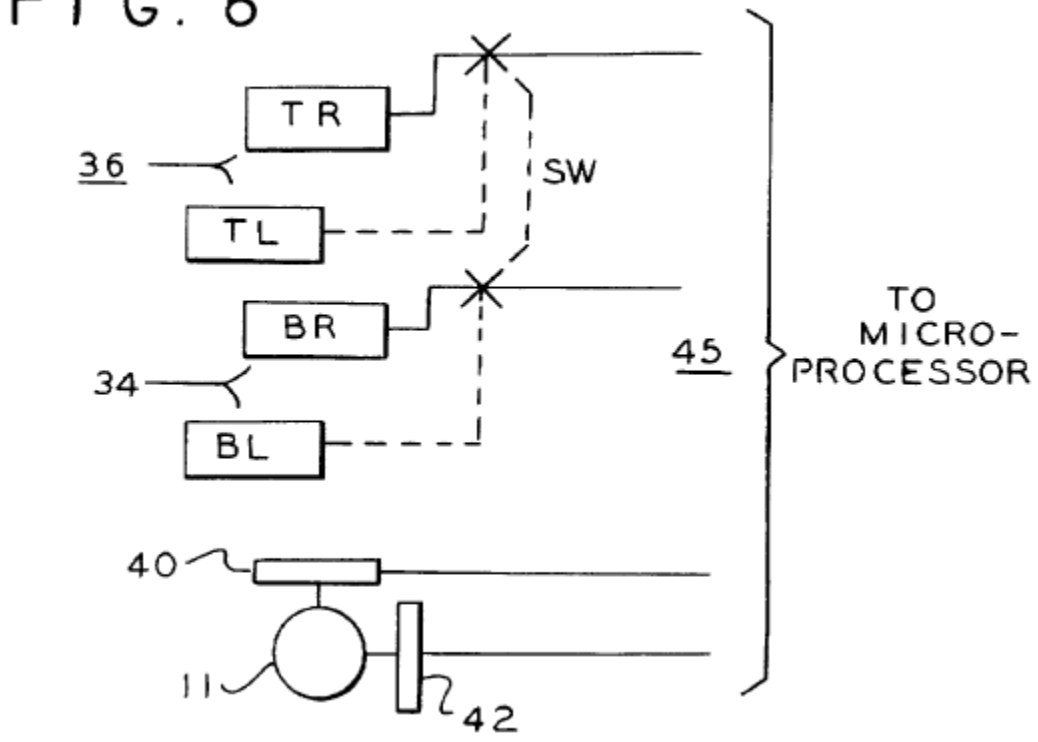
	'200 Claim Language	**JPA-H8-123615**
	signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	
7.	The apparatus as claimed in claim 6, further comprising a button set for clicking an icon selected by the mouse cursor.	*See claim limitation 2.*
8.	The apparatus as claimed in claim 7, wherein the button set has a left button and a right button.	*See claim limitation 3.*
9.	The apparatus as claimed in claim 6, wherein the N-stage switch is configured on a lateral surface of the mouse.	Wa discloses "a stepped part 4 has been provided in the rear part of the mouse housing 3 so as to allow manipulation of the sensitivity switching switch 2 with the thumb. As is evident from the drawing, this makes it possible to manipulate the operating buttons 6 with the index finger and middle finger and to manipulate the sensitivity-switching switch 2 with the thumb while moving the mouse at the same time." *See, e.g.*, ¶ 0004; Fig. 1.

	’200 Claim Language	JPA-H8-123615
		[FIG. 1]  Switch is on lateral surface A) Perspective view of mouse 1 of the present invention, which allows simultaneous sensitivity switching while manipulating the mouse  B) Perspective view illustrating the state of use thereof. [FIG. 2]  Perspective view of a conventional mouse 1' with a sensitivity switching switch

Invalidity of U.S. Patent No. 7,532,200 by U.S. Patent No. 5,894,303 ("Barr")

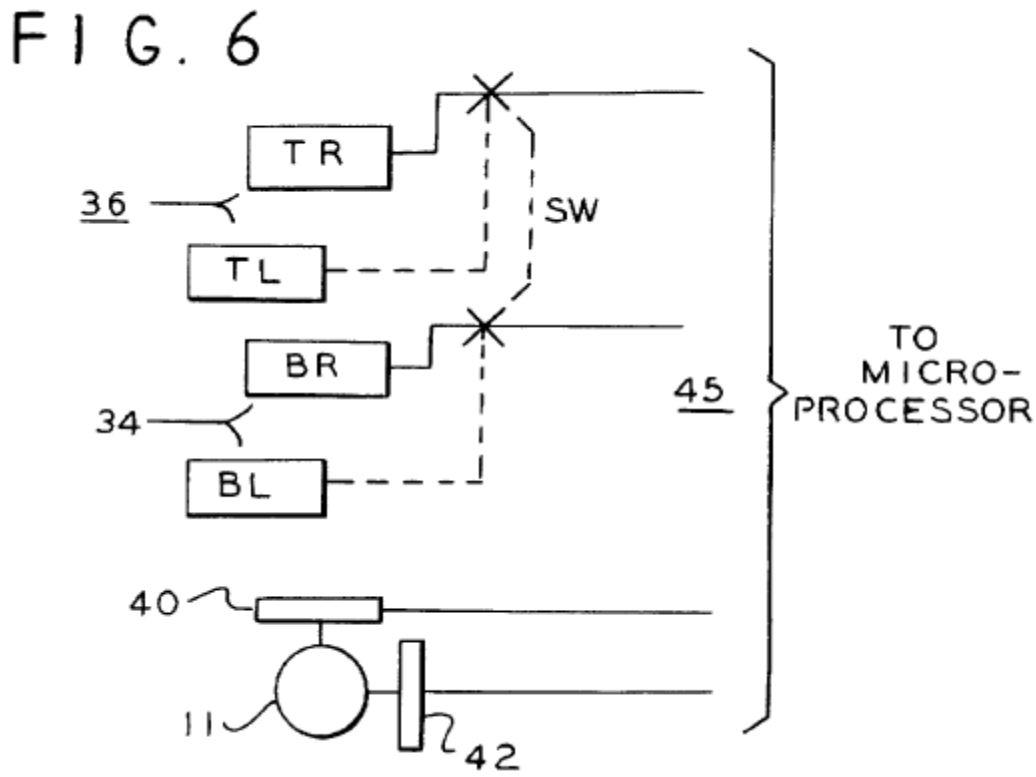
Based upon the claim interpretations Better Mouse Company, LLC ("BMC") appears to be asserting and the applications of those interpretations to Defendants' products in BMC's Infringement Contentions, U.S. Patent No. 5,894,303 to Barr issued on April 13, 1999 ("Barr") anticipates and/or renders obvious, alone or in combination with other prior art identified in Defendants' Invalidity Contentions, the asserted claims as described in part below. This invalidity claim chart is not an admission by Defendants that the accused products, including any current or past versions of these products, are covered by, or infringe these claims, particularly when they are properly construed. Nothing in these contentions should be interpreted as an acquiescence to or assertion of a particular claim construction by Defendants.

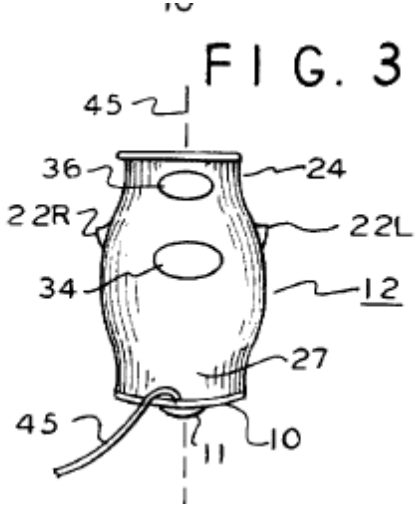
	'200 Claim Language	**Disclosure**
1.	1. An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	*To the extent the preamble is considered to limit the claim, Barr discloses an apparatus that sets the multi-stage displacement resolution of a mouse.* *See, e.g.*, Abstract, 1:20-2:27.
1A	a X-Y axis plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	*Barr discloses an X-Y axis plane displacement detector that senses the distance and moving direction of the mouse.* *See, e.g.*, Abstract, 1:20-2:27; 2:45-57("The vertically oriented novel mouse rests in a base which is essentially flat. The novel mouse includes a capacitive ball, mounted for rotational movement within its mounting. The ball is bias mounted and extends from the base and makes rolling contact with the surface over which the mouse is moved or driven. Rotation of the ball in its mounting drives two coordinate wheels are electrically coupled to the computer interface. The internal structure of the mouse may be that which is well known in the art, an example of which is taught and shown in the U.S. Patent No. 5,298,919, issued Mar. 29, 1995 to Mingtal Chang."
1B	a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to generate the resolution value directly, each	*Barr discloses a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to generate the resolution value directly, each switch being coupled to a resolution setting pin, each resolution setting*

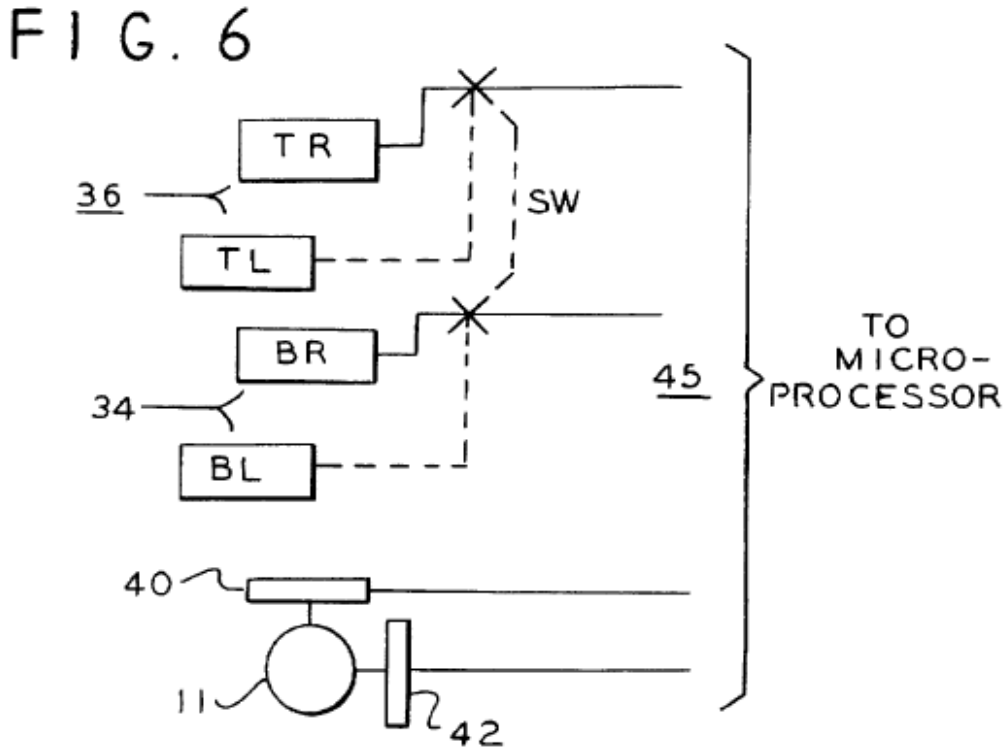
	'200 Claim Language	**Disclosure**
	switch being coupled to a resolution setting pin, each resolution setting pin having a state determined by the switch coupled thereto; and	*pin having a state determined by the switch coupled thereto*. *See, e.g.*, 1 :36-50; 2:45-3:40; 4:56-5:20; 4:63-67("The middle finger 30 and the index finger 32 extend around the upper front end of the body of the mouse and each finger makes contact with one button, respectively, of two spaced buttons 34 and 36, which are preferably flush mounted, pressure sensitive buttons or switches, although other switches may be used, if desired.") FIG. 6 

Invalidity of U.S. Patent No. 7,532,200 by U.S. Patent No. 5,894,303 ("Barr")

	'200 Claim Language	**Disclosure**
1C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the states of the resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	*Barr discloses a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the states of the resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.* *See, e.g.*, 1 :36-50; 2:45-3:40; 4:56-5:20; 5:13-19("The wheels 40 and 42 are electrically connected to interface with a microprocessor or computer, in a manner which is well known in the art. A cable 45, the electrical connection to the interface, is represented extending from the base of the mouse.")

	'200 Claim Language	**Disclosure**
		
2.	The apparatus as claimed in claim 1, further comprising a button set for clicking an icon selected by the mouse cursor.	*Barr discloses an apparatus as claimed in claim 1, further comprising a button set for clicking an icon selected by the mouse cursor.* *See, e.g.*, Abstract, 1:20-2:27; 2:45-57("The vertically oriented novel mouse rests in a base which is essentially flat. The novel mouse includes a capacitive ball, mounted for rotational movement within its mounting. The ball is bias mounted and extends from

	'200 Claim Language	**Disclosure**
		the base and makes rolling contact with the surface over which the mouse is moved or driven. Rotation of the ball in its mounting drives two coordinate wheels are electrically coupled to the computer interface. The internal structure of the mouse may be that which is well known in the art, an example of which is taught and shown in the U.S. Patent No. 5,298,919, issued Mar. 29, 1995 to Mingtal Chang."
3.	The apparatus as claimed in claim 2, wherein the button set has a left button and a right button.	*Barr discloses an apparatus as claimed in claim 2, wherein the button set has a left button and a right button.* *See, e.g.*, Fig 1-4. 

	'200 Claim Language	**Disclosure**
4.	The apparatus as claimed in claim 1, wherein the switching circuit is configured on a lateral surface of the mouse.	*Barr discloses an apparatus as claimed in claim 1, wherein the switch is configured on a lateral surface of the mouse.*  *See, e.g.*, Fig 1-4.

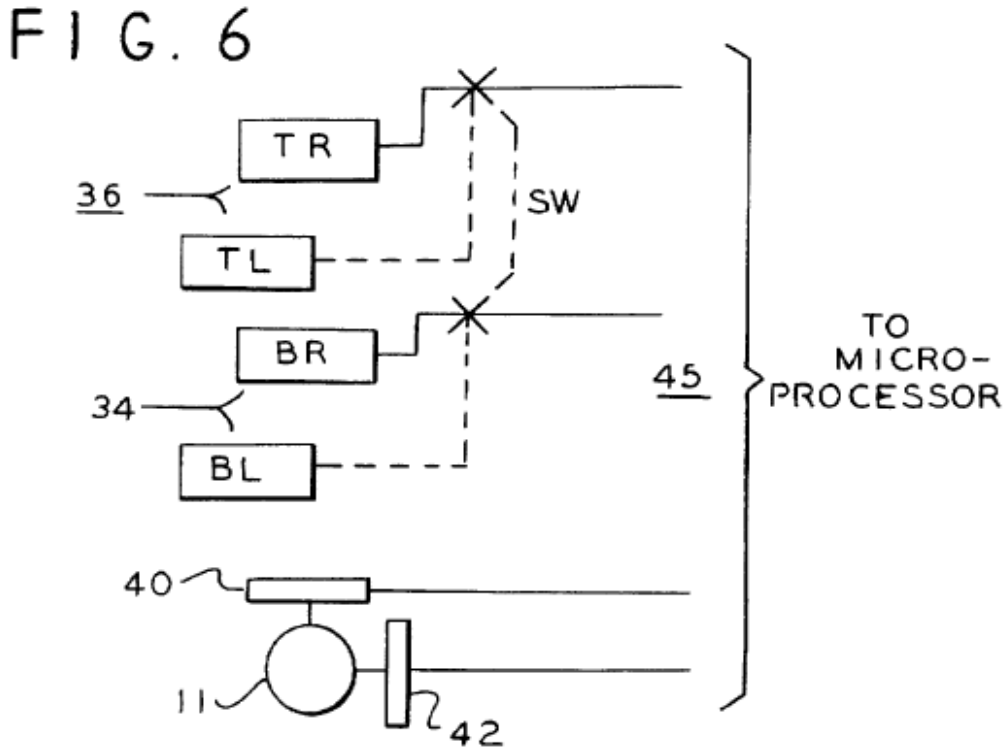
Invalidity of U.S. Patent No. 7,532,200 by U.S. Patent No. 5,894,303 ("Barr")

	'200 Claim Language	Disclosure
6.	An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	*To the extent the preamble is considered to limit the claim, Barr discloses an apparatus for setting multi-stage displacement resolution of a mouse.* *See claim limitation 1.*
6A	a X-Y plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	*Barr discloses a X-Y plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space.* *See claim limitation 1A.*
6B	an N-stage switch for setting a resolution value, the N-stage switching circuit having a switching button capable of being manually switched to one of the positions 1 to N, and accordingly activating a connected resolution setting pin to indicate a state, where N is a positive integer; and	*Barr discloses an N-stage switch for setting a resolution value, the N-stage switching circuit having a switching button capable of being manually switched to one of the positions 1 to N, and accordingly activating a connected resolution setting pin to indicate a state, where N is a positive integer.* *See claim limitation 1B.*
6C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the state of the connected resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving	*Barr discloses a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the state of the connected resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.*

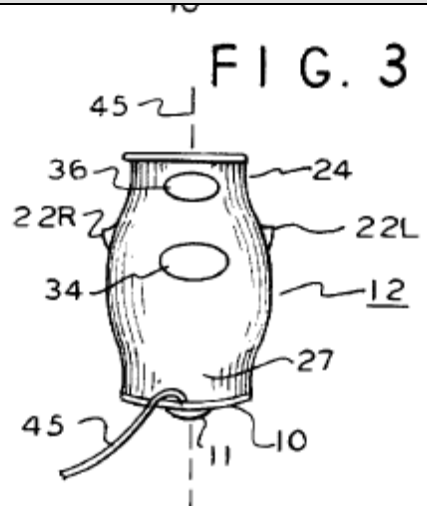
Invalidity of U.S. Patent No. 7,532,200 by U.S. Patent No. 5,894,303 ("Barr")

	'200 Claim Language	**Disclosure**
	direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	*See claim limitation 1C.*
7.	The apparatus as claimed in claim 6, further comprising a button set for clicking an icon selected by the mouse cursor.	*Barr discloses an apparatus as claimed in claim 6, further comprising a button set for clicking an icon selected by the mouse cursor.* *See claim limitation 2.*
8.	The apparatus as claimed in claim 7, wherein the button set has a left button and a right button.	*Barr discloses an apparatus as claimed in claim 7, wherein the button set has a left button and a right button.* *See claim limitation 3.*
9.	The apparatus as claimed in claim 6, wherein the N-stage switch is configured on a lateral surface of the mouse.	*Barr discloses an apparatus as claimed in claim 6, wherein the N-stage switch is configured on a lateral surface of the mouse.*

Invalidity of U.S. Patent No. 7,532,200 by U.S. Patent No. 5,894,303 ("Barr")

	'200 Claim Language	Disclosure
		 *See, e.g.*, Fig 1-4.

Invalidity of U.S. Patent No. 7,532,200 by U.S. Patent No. 5,894,303 ("Barr")

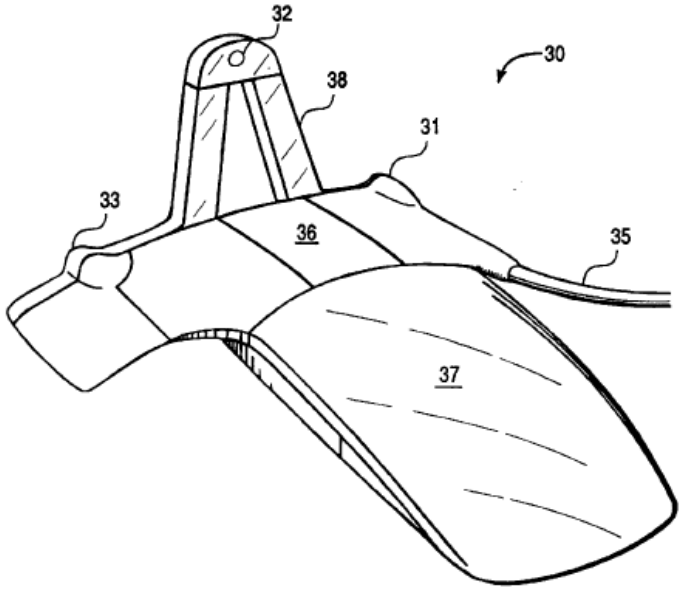
	'200 Claim Language	Disclosure
		

Invalidity of U.S. Patent No. 7,532,200 by U.S. Patent No. 6,069,594 ("Barnes")

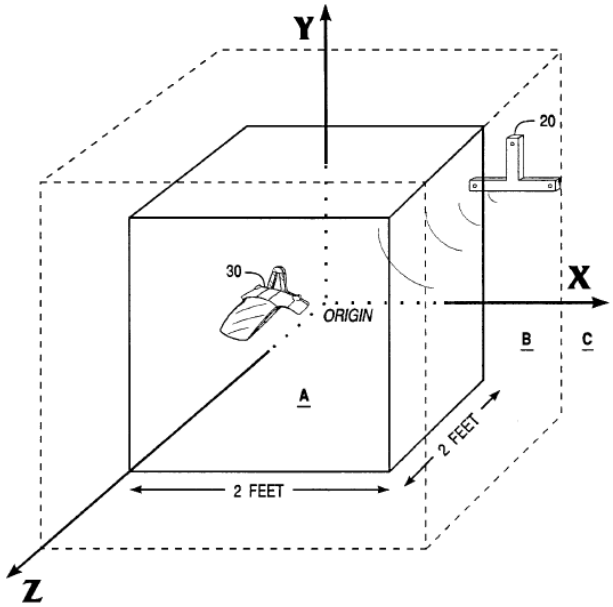
Based upon the claim interpretations Better Mouse Company, LLC ("BMC") appears to be asserting and the applications of those interpretations to Defendants' products in BMC's Infringement Contentions, U.S. Patent No. 6,069,594 to Barnes et al. issued on May 30, 2000 ("Barnes") anticipates and/or renders obvious, alone or in combination with other prior art identified in Defendants' Invalidity Contentions, the asserted claims as described in part below. This invalidity claim chart is not an admission by Defendants that the accused products, including any current or past versions of these products, are covered by, or infringe these claims, particularly when they are properly construed. Nothing in these contentions should be interpreted as an acquiescence to or assertion of a particular claim construction by Defendants.

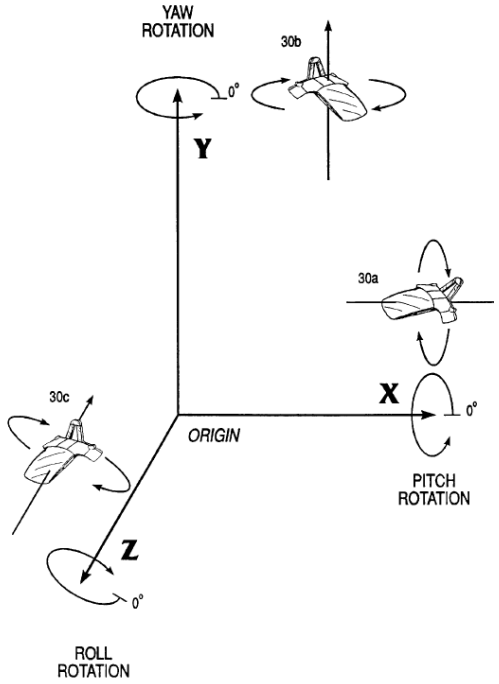
	'200 Claim Language	**Disclosure**
1.	1. An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	*To the extent the preamble is considered to limit the claim, Barnes discloses an apparatus that sets the multi-stage displacement resolution of a mouse.* *See, e.g.*, Abstract.
1A	a X-Y axis plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	*Barnes discloses an X-Y axis plane displacement detector that senses the distance and moving direction of the mouse.* *See, e.g.*, Abstract; 8:37-53; 9:7-42.

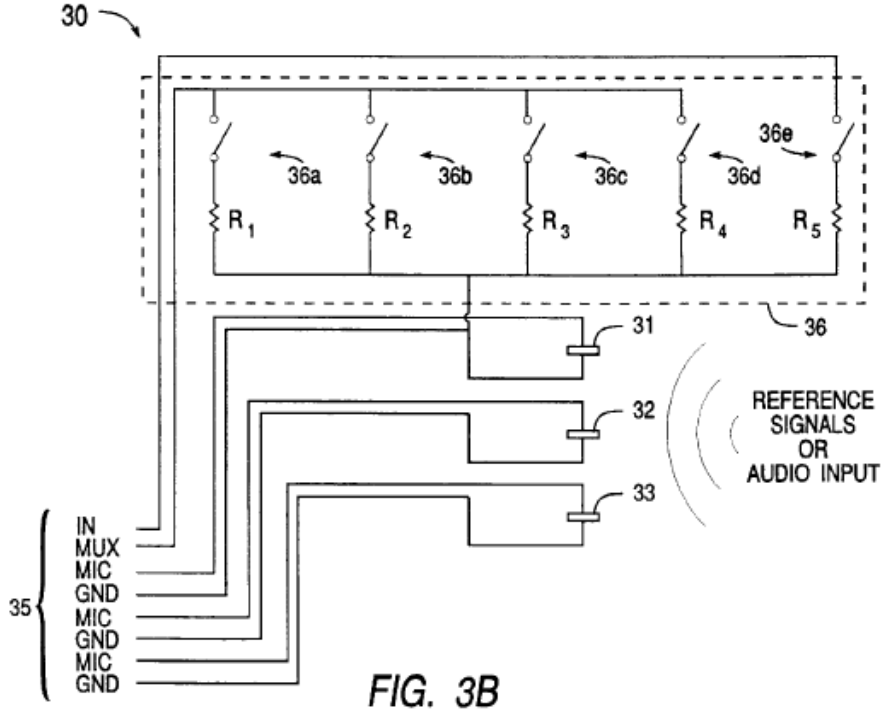
Invalidity of U.S. Patent No. 7,532,200 by U.S. Patent No. 6,069,594 ("Barnes")

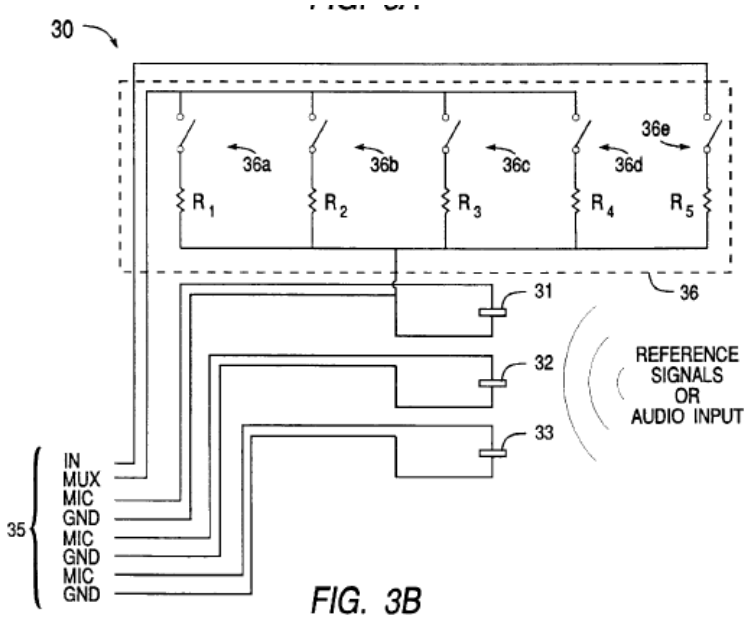
	'200 Claim Language	**Disclosure**
		 FIG. 3A

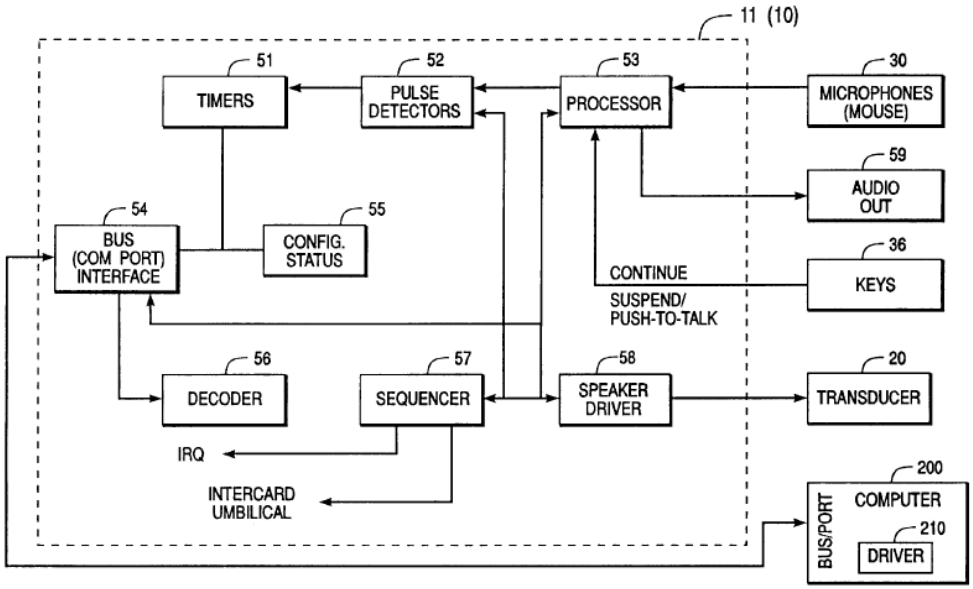
Invalidity of U.S. Patent No. 7,532,200 by U.S. Patent No. 6,069,594 ("Barnes")

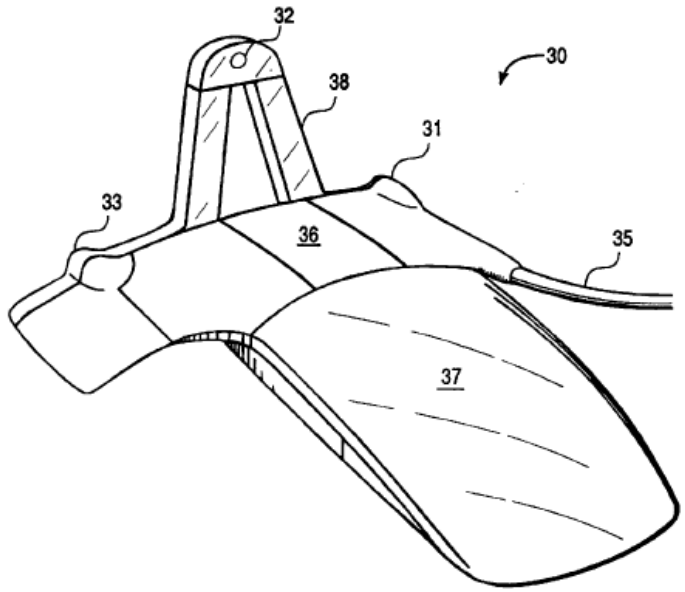
	'200 Claim Language	**Disclosure**
		

	’200 Claim Language	Disclosure
		 FIG. 6A
1B	a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to generate the resolution value directly, each switch being coupled to a resolution setting pin, each resolution setting pin having a state determined by the switch coupled	*Barnes discloses a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to generate the resolution value directly, each switch being coupled to a resolution setting pin, each resolution setting pin having a state determined by the switch coupled thereto.* *See, e.g.*, 1:15-2:65; 6:29-43 ("Referring to FIG. 3B, a schematic diagram of the mouse 30 is shown. Keys 36 comprise a plurality of switches, such as switches 36a—e. By providing each switch with a resistor (e.g., R1_5) which has a unique resistance and

	'200 Claim Language	**Disclosure**
	thereto; and	which provides a unique sum resistance When added to others resistors, various combinations of keys or switches 36 may be determined. As shown, one switch (e.g., switch 36e) may serve as a master switch. Also shown in FIG. 3B, are the microphones 31, 32, 33, each having separate input and output lines. One of the microphone elements (or more), such as microphone 31, may also be coupled to the switches (e.g., by a ground line) for switch-activation of that element. All input/output lines of the keys 36 and microphone elements 31, 32, 33 are combined into the single line 35, which may be connected to the interface 10 (or 11).")  FIG. 3B *See, e.g.*, 8:54-62; 9:7-27;

	'200 Claim Language	**Disclosure**
1C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the states of the resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	*Barnes discloses a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the states of the resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.* *See, e.g.*, Abstract; 8:37-53; 9:7-42; 8:22-29.  FIG. 3B

	'200 Claim Language	Disclosure
		 *FIG. 4*
2.	The apparatus as claimed in claim 1, further comprising a button set for clicking	*Barnes discloses an apparatus as claimed in claim 1, further comprising a button set*

	'200 Claim Language	**Disclosure**
	an icon selected by the mouse cursor.	*for clicking an icon selected by the mouse cursor.* *See, e.g.*, Figs, Abstract; 5:34-47.
3.	The apparatus as claimed in claim 2, wherein the button set has a left button and a right button.	*Barnes discloses an apparatus as claimed in claim 2, wherein the button set has a left button and a right button.* *See, e.g.*, Figs.  FIG. 3A

	'200 Claim Language	**Disclosure**
4.	The apparatus as claimed in claim 1, wherein the switching circuit is configured on a lateral surface of the mouse.	*Barnes discloses an apparatus as claimed in claim 1, wherein the switch is configured on a lateral surface of the mouse.* See, e.g., Abstract, Figs; 5:49-67.
6.	An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	*To the extent the preamble is considered to limit the claim, Barnes discloses an apparatus for setting multi-stage displacement resolution of a mouse.* *See claim limitation 1.*
6A	a X-Y plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	*Barnes discloses a X-Y plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space.* *See claim limitation 1A.*
6B	an N-stage switch for setting a resolution value, the N-stage switching circuit having a switching button capable of being manually switched to one of the positions 1 to N, and accordingly activating a connected resolution setting pin to indicate a state, where N is a positive integer; and	*Barnes discloses an N-stage switch for setting a resolution value, the N-stage switching circuit having a switching button capable of being manually switched to one of the positions 1 to N, and accordingly activating a connected resolution setting pin to indicate a state, where N is a positive integer.* *See claim limitation 1B.*
6C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the state of the connected resolution setting pins, setting a	*Barnes discloses a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the state of the connected resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a*

	'200 Claim Language	**Disclosure**
	mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	*control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.* *See claim limitation 1C.*
7.	The apparatus as claimed in claim 6, further comprising a button set for clicking an icon selected by the mouse cursor.	*Barnes discloses an apparatus as claimed in claim 6, further comprising a button set for clicking an icon selected by the mouse cursor.* *See claim limitation 2.*
8.	The apparatus as claimed in claim 7, wherein the button set has a left button and a right button.	*Barnes discloses an apparatus as claimed in claim 7, wherein the button set has a left button and a right button.* *See claim limitation 3.*
9.	The apparatus as claimed in claim 6, wherein the N-stage switch is configured on a lateral surface of the mouse.	*Barnes discloses an apparatus as claimed in claim 6, wherein the N-stage switch is configured on a lateral surface of the mouse.*

Invalidity of U.S. Patent No. 7,532,200 by U.S. Patent No. 6,069,594 ("Barnes")

	'200 Claim Language	**Disclosure**
		See, e.g., Abstract, Figs; 5:49-67.

Invalidity of U.S. Patent No. 7,532,200 by U.S. Patent No. 6,252,579 ("Rosenberg")

Based upon the claim interpretations Better Mouse Company, LLC ("BMC") appears to be asserting and the applications of those interpretations to Defendants' products in BMC's Infringement Contentions, U.S. Patent No. 6,252,579 issued on June 26, 2001 ("Rosenberg") anticipates and/or renders obvious, alone or in combination with other prior art identified in Defendants' Invalidity Contentions, the asserted claims as described in part below. This invalidity claim chart is not an admission by Defendants that the accused products, including any current or past versions of these products, are covered by, or infringe these claims, particularly when they are properly construed. Nothing in these contentions should be interpreted as an acquiescence to or assertion of a particular claim construction by Defendants.

	'200 Claim Language	**Disclosure**
1.	1. An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	"One aspect of the present invention is concerned with mouse system 10 allowing an enhanced degree of control over a cursor for a user …. The enhanced degree of cursor control includes **fine positioning** of the cursor for target acquiring and other tasks, **as well as coarse positioning** of the cursor that is unencumbered and uninhibited by the fine positioning." [Col. 18, lines 22-30.]
1A	a X-Y axis plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	Mouse system 10 is "moved within a substantially planar workspace." [Col. 8, line8.] "[T]he user manipulates mouse 12 in a planar workspace and the position of mouse 12 is translated into a form suitable for interpretation by **position sensors** of the interface 14." [Col. 8 lines 49-52.] "Linkage 40 … provide[s] mouse 12 with two degrees of freedom, i.e., **mouse 12 can be moved within a planar workspace defined by the x-y plane**, which is defined by the x- and y-axes as shown in FIG. 2." [Col. 11, line 64 – col. 12, line 3.]
1B	a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to	**"[T]he user may press button 15 on mouse 12** (or other input devices) **to manually command the mouse to exit fine positioning mode."** [Col. 21 lines 25-29.] Button 15 is a 2-stage switch for setting resolution value capable of being manually switched

	'200 Claim Language	**Disclosure**
	generate the resolution value directly, each switch being coupled to a resolution setting pin, each resolution setting pin having a state determined by the switch coupled thereto; and	to one of positions 1 to 2.
1C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the states of the resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	"Position control is the more typical control paradigm for mouse and similar controllers, and refers to a mapping of mouse 12 in which displacement of the mouse in physical space directly dictates displacement of a graphical object." [Col. 10, lines 23-27.] "In a position control paradigm, the position (or change in position) of a user-controlled graphical object, **such as a cursor**, in display frame 30 corresponds to a position (or change in position) of the mouse 12 in the local frame 28." [Col. 10, lines 44-48.] "[T]he **microprocessor** can check for conditions to exit the fine positioning mode of the cursor. For example, the user may press button 15 on mouse 12 (or other input devices) to manually command the mouse to exit fine positioning mode." [Col. 21, lines 25-29.]
2.	The apparatus as claimed in claim 1, further comprising a button set for clicking an icon selected by the mouse cursor.	"In addition, mouse **12** preferably includes one or more buttons **15** to allow the user to provide additional commands to the computer system." [Col. 8, lines 26-28.]

Invalidity of U.S. Patent No. 7,532,200 by U.S. Patent No. 6,252,579 ("Rosenberg")

	'200 Claim Language	**Disclosure**
3.	The apparatus as claimed in claim 2, wherein the button set has a left button and a right button.	"In addition, mouse **12** preferably includes one or more buttons **15** to allow the user to provide additional commands to the computer system." [Col. 8, lines 26-28; *see also* Figure 1.]
4.	The apparatus as claimed in claim 1, wherein the switching circuit is configured on a lateral surface of the mouse.	**"[T]he user may press button 15 on mouse 12** (or other input devices) **to manually command the mouse to exit fine positioning mode."** [Col. 21 lines 25-29.] Button 15 is a 2-stage switch for setting resolution value capable of being manually switched to one of positions 1 to 2.
6.	An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	See claim limitation 1.
6A	a X-Y plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	See claim limitation 1A.
6B	an N-stage switch for setting a resolution value, the N-stage switching circuit having a switching button capable of being manually switched to one of the positions 1 to N, and accordingly activating a connected resolution setting pin to indicate a state, where N is a positive integer; and	See claim limitation 1B.

Invalidity of U.S. Patent No. 7,532,200 by U.S. Patent No. 6,252,579 ("Rosenberg")

	'200 Claim Language	**Disclosure**
6C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the state of the connected resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	See claim limitation 1C.
7.	The apparatus as claimed in claim 6, further comprising a button set for clicking an icon selected by the mouse cursor.	See claim limitation 2.
8.	The apparatus as claimed in claim 7, wherein the button set has a left button and a right button.	See claim limitation 3.

Invalidity of U.S. Patent No. 7,532,200 by U.S. Patent No. 6,252,579 ("Rosenberg")

	'200 Claim Language	**Disclosure**
9.	The apparatus as claimed in claim 6, wherein the N-stage switch is configured on a lateral surface of the mouse.	**"[T]he user may press button 15 on mouse 12** (or other input devices) **to manually command the mouse to exit fine positioning mode."** [Col. 21 lines 25-29.] Button 15 is a 2-stage switch for setting resolution value capable of being manually switched to one of positions 1 to 2.

Invalidity of Asserted Claims of U.S. Patent No. 7,532,200
Under 35 U.S.C. §§ 102(a),(b) and 103 by Japanese Patent Application No. JP3090806 (U)[1]

Based upon the claim interpretations Better Mouse Company, LLC ("BMC") appears to be asserting and the applications of those interpretations to Defendants' products in BMC's Infringement Contentions, **JP3090806 (U)** anticipates and/or renders obvious, alone or in combination with other prior art identified in Defendants' Invalidity Contentions, the asserted claims as described in part below. This invalidity claim chart is not an admission by Defendants that the accused products, including any current or past versions of these products, are covered by, or infringe these claims, particularly when they are properly construed. Nothing in these contentions should be interpreted as an acquiescence to or assertion of a particular claim construction by Defendants.

	'200 Claim Language	**JP3090806 (U)**
1.	1. An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	JP3090806 (U) discloses an apparatus that sets multi-stage displacement resolution of a mouse. *See, e.g.*, ¶ 0004 (describing the invention as an "adjustable mouse … [with] a speed change key … [to] change the degree of analysis of this mouse directly by the switching operation of this speed change key, [which] changes the movement speed on the monitor").
1A	a X-Y axis plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	JP3090806 (U) discloses an X-Y axis plane displacement detector that senses the distance and moving direction of the mouse. *See, e.g.*, ¶ 0005 ("An image sensor can detect change of a movement zone, and it can convert to the degree of

[1] Japanese Utility Model Application No. JP3090806 (U) was published on October 9, 2002, which was well before the January 18, 2005, filing date of U.S. Patent No. 7,532,200 ("the '200 Patent"). JP3090806 (U) therefore constitutes prior art under 35 U.S.C. §§ 102 (a) and (b). To the extent that JP3090806 (U) is found not to anticipate one or more claims of the '200 Patent under 35 U.S.C. §102, JP3090806 (U) renders those claims obvious under 35 U.S.C. §103 when combined with other art identified in Defendants' Invalidity Contentions. It would have been obvious to combine the teachings of JP3090806 (U) with other art identified in Defendants' Invalidity Contentions at least because the references all pertain to setting multi-stage displacement resolution of a computer mouse directly through a switch on the mouse.

	’200 Claim Language	JP3090806 (U)
		analysis, and a x axis and y axis coordinates can be input….”).
1B	a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to generate the resolution value directly, each switch being coupled to a resolution setting pin, each resolution setting pin having a state determined by the switch coupled thereto; and	JP3090806 (U) discloses a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to generate the resolution value directly, without the use of a software driver/tool running on a computer to which the mouse is connected. *See, e.g.*, ¶ 0006 (“A speed change key or a push button is connected with the microcontroller, 2 or more sets of different analysis degree control programs are incorporated in this microcontroller, and selection use of the mouse of this design is carried out with a speed change key or a push button. When using the above structure, directly by control of this speed change key or a push button, [c]hoose one analysis degree program in a microcontroller, and it enables it to read a picture signal by the speed which is the degree of analysis from which an image sensor differs….”). On information and belief, the mouse microprocessor disclosed in JP3090806 (U) must have “pins.” Pins are necessary for an integrated circuit such as a microcontroller to electrically interface with other electrical components and/or a circuit board. Since the microcontroller of JP3090806 (U) electrically interfaces with several other electrical components, it necessarily includes pins.
1C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the states of the resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the	On information and belief, a person of ordinary skill in the art knows that all microcontrollers necessarily have multiple registers and that any parameter calculated or read by the microcontroller must be stored for some period of time in a register in the microcontroller. JP3090806 (U) discloses a microcontroller that sets mouse resolution (and stores it in a register) based on the states of the resolution setting pins. The states of the resolution setting pins are determined by the speed change key or push button 5. JP3090806 (U) further discloses that the mouse micro controller responds to the distance and moving direction sensed by

	’200 Claim Language	JP3090806 (U)
	register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register. *See, e.g.*, ¶ 0007. (“[T]his design combines the microcontroller 1 and the image sensor 2. This image sensor 2 reads the reference scattered number (degree of analysis) signal of each unit movement in response to control of the microcontroller 1…. After converting and making with a x axis and y axis-coordinates value, it transmits to the microcontroller 1.”); *see also* ¶ 0006 (“Furthermore, a microcontroller … transmits to a computer, and the movement speed on the monitor of the cursor of this mouse is changed simply in this way, and it enables … good move accuracy.”).
2.	The apparatus as claimed in claim 1, further comprising a button set for clicking an icon selected by the mouse cursor.	JP3090806 (U) discloses an improvement upon a standard mouse, thereby rendering it an “adjustable mouse.” A person of ordinary skill in the art would understand that a standard mouse includes two buttons, a left button and a right button (*i.e.*, a “button set”), for clicking an icon selected by the mouse cursor. To the extent a mouse with a “button set for clicking an icon” was not disclosed in JP3090806 (U), it would have been obvious to incorporate a button set like that disclosed in Chien. *See* Chien, at Fig. 2. A person of skill in the art would have been motivated to use a mouse with left and right buttons because it is a practical, convenient, and standard mouse configuration and because it would conform to existing devices and therefore consumer expectations.
3.	The apparatus as claimed in claim 2,	JP3090806 (U) discloses an improvement upon a standard mouse, thereby

	’200 Claim Language	JP3090806 (U)
	wherein the button set has a left button and a right button.	rendering it an “adjustable mouse.” A person of ordinary skill in the art would understand that a standard mouse includes two buttons, a left button and a right button (*i.e.*, a “button set”), for clicking an icon selected by the mouse cursor. To the extent a mouse with a “button set for clicking an icon” was not disclosed in JP3090806 (U), it would have been obvious to incorporate a button set like that disclosed in Chien. *See* Chien, at Fig. 2. A person of skill in the art would have been motivated to use a mouse with left and right buttons because it is a practical, convenient, and standard mouse configuration and because it would conform to existing devices and therefore consumer expectations.
4.	The apparatus as claimed in claim 1, wherein the switching circuit is configured on a lateral surface of the mouse.	JP3090806 (U) discloses a speed change key or push button 5 that is designed to be manually adjusted. To the extent such a manually speed change key or push button was found not to be configured on a lateral side of a mouse, Chien discloses a mouse with a “changeable input ratio” (Chien, at 1:7-8) where when two switches positioned on the lateral frame of the mouse are pressed, a microprocessor in the mouse multiplies the sliding dance by a predetermined constant. *Id.*, at 3:10-16. It would have been obvious to position the speed change key or push button like that disclosed in JP3090806 (U) “on a lateral surface of the mouse,” as taught by Chien. A mouse designer has freedom to place switches wherever is most convenient for the user. Placing the resolution setting switch on a lateral surface of the mouse is obvious. A person of skill in the art would have been motivated to place a switch on a lateral surface of the mouse so that users are not confused with the mouse’s normal operation buttons and so that the resolution setting buttons are not depressed accidentally.

	’200 Claim Language	JP3090806 (U)
6A	a X-Y plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	*See claim limitation 1A.*
6B	an N-stage switch for setting a resolution value, the N-stage switching circuit having a switching button capable of being manually switched to one of the positions 1 to N, and accordingly activating a connected resolution setting pin to indicate a state, where N is a positive integer; and	*See claim limitation 1B.* Because JP3090806 (U) discloses two *or more* resolution settings based on degree control analysis, JP3090806 (U) discloses an N-stage switch capable of being switched to one of positions 1 to N, where N is 2 or more. *See, e.g.*, ¶ 0006 (“A speed change key or a push button is connected with the microcontroller, 2 or more sets of different analysis degree control programs are incorporated in this microcontroller, and selection use of the mouse of this design is carried out with a speed change key or a push button. When using the above structure, directly by control of this speed change key or a push button, [c]hoose one analysis degree program in a microcontroller, and it enables it to read a picture signal by the speed which is the degree of analysis from which an image sensor differs….”).
6C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the state of the connected resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane	*See claim limitation 1C.*

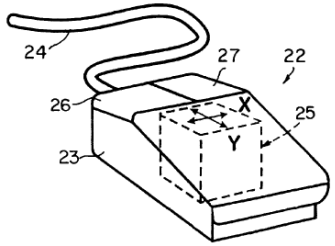
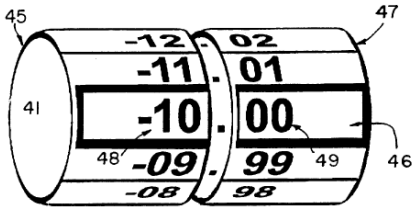
	’200 Claim Language	JP3090806 (U)
	displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	
7.	The apparatus as claimed in claim 6, further comprising a button set for clicking an icon selected by the mouse cursor.	*See claim limitation 2.*
8.	The apparatus as claimed in claim 7, wherein the button set has a left button and a right button.	*See claim limitation 3.*
9.	The apparatus as claimed in claim 6, wherein the N-stage switch is configured on a lateral surface of the mouse.	JP3090806 (U) discloses a speed change key or push button 5 that is designed to be manually adjusted. To the extent such a manually speed change key or push button was found not to be configured on a lateral side of a mouse, Chien discloses a mouse with a “changeable input ratio” (Chien, at 1:7-8) where when two switches positioned on the lateral frame of the mouse are pressed, a microprocessor in the mouse multiplies the sliding dance by a predetermined constant. *Id.*, at 3:10-16. It would have been obvious to position the speed change key or push button like that disclosed in JP3090806 (U) “on a lateral surface of the mouse,” as taught by Chien. A mouse designer has freedom to place switches wherever is most convenient for the user. Placing the resolution setting switch on

	’200 Claim Language	JP3090806 (U)
		a lateral surface of the mouse is obvious. A person of skill in the art would have been motivated to place a switch on a lateral surface of the mouse so that users are not confused with the mouse’s normal operation buttons and so that the resolution setting buttons are not depressed accidentally.

Invalidity of U.S. Patent No. 7,532,200 by U.S. Patent No. 6,532,001 ("Taraki")

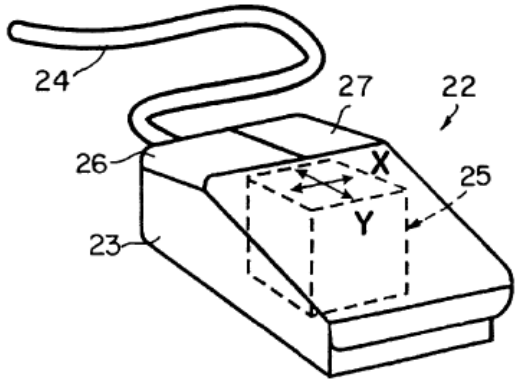
Based upon the claim interpretations Better Mouse Company, LLC ("BMC") appears to be asserting and the applications of those interpretations to Defendants' products in BMC's Infringement Contentions, U.S. Patent No. 6,532,001 to Taraki issued on March 11, 2003 ("Taraki") anticipates and/or renders obvious, alone or in combination with other prior art identified in Defendants' Invalidity Contentions, the asserted claims as described in part below. This invalidity claim chart is not an admission by Defendants that the accused products, including any current or past versions of these products, are covered by, or infringe these claims, particularly when they are properly construed. Nothing in these contentions should be interpreted as an acquiescence to or assertion of a particular claim construction by Defendants.

	'200 Claim Language	**Disclosure**
1.	1. An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	*To the extent the preamble is considered to limit the claim, Taraki discloses an apparatus that sets the multi-stage displacement resolution of a mouse.* *See, e.g.*, Abstract.
1A	a X-Y axis plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	*Taraki discloses an X-Y axis plane displacement detector that senses the distance and moving direction of the mouse.* *See, e.g.*, Claims and Figs. 2, 5 and 8 and corresponding text in the specification describing those figures.

	’200 Claim Language	Disclosure
		 FIG. 2  FIG. 5 *See, e.g.*, 2 :48-64 ("Certain features of the invention are attained by providing display control apparatus comprising a display screen, a mouse having an X-Y motion sensor and control buttons, and a processor coupled to the display screen and to the mouse and operable under stored program control for controlling the display screen to display thereon indicia including a cursor associated with the mouse, the processor including means cooperating with the mouse to define first and second operational modes for the mouse wherein in the first mode the processor is responsive to movements of the mouse detected by the X-Y motion sensor for effecting corresponding movements of the cursor on the screen and wherein the second mode the processor is responsive to

	'200 Claim Language	Disclosure
		movements of the mouse detected by the X-Y motion sensor while the cursor is on another indicium to control the condition of the other indicium without affecting the location on the screen of either the cursor or the other indicium.") *See, e.g.*, Claim 1 ("… a mouse having X-Y motion sensor…")
1B	a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to generate the resolution value directly, each switch being coupled to a resolution setting pin, each resolution setting pin having a state determined by the switch coupled thereto; and	*Taraki discloses a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to generate the resolution value directly, each switch being coupled to a resolution setting pin, each resolution setting pin having a state determined by the switch coupled thereto.* *See, e.g.*, 1 :16-19 ("The routine first updates the mouse travel counters for X travel and Y travel based upon mouse movement. The program then checks at 82 to see if the magnitude of the vertical (Y travel) component is greater than the horizontal (X travel) component. If not, the mouse movement is not substantially vertical, so the program at 83 sets Y travel to Zero and then checks at 84 to see of the horizontal Scroll is enabled. As was indicated above, it will be enabled if a fixed-time sweep has been selected on the Pattern/Sweep icon 36, the Freeze icon 34 is set to the FREEZE mode and the Frame select icon 41 is emphasized. If the horizontal Scroll is not enabled, the subroutine is immediately exited at 85. If the horizontal Scroll is enabled at 84, the program next checks at 86 to see if the X travel is greater than X-STEP, i.e., that a right-hand horizontal movement of one step has been detected. If so, the program at 87 indexes forward or right one step in the list of switch options associated With the fractional number part 49 of the frame number, i.e., 0.01 frame. The program then at 88 sets X travel and Y travel counters back to Zero and exits. If sufficient right horizontal motion is not detected at 86, the program checks at 89 to see if X travel is less than — X-STEP, signifying a left-hand horizontal movement of one step. If not, the program is exited and if so, the program at 90 indexes backward one step in the fractional part 49 of the frame number and then moves to block 88.")

	'200 Claim Language	Disclosure
		See, e.g., Claims 1-15; Claim 3 ("wherein the icon represents two switches and said processor includes means assigning to each switch a list of graphical images respectively representing different switch options With one image at a time from each list being displayed in said icon, said processor in the second operational mode of the mouse being responsive to substantially vertical movements of the mouse detected by the X-Y motion sensor for scrolling through the list of character groups assigned to one of the switches and responsive to substantially horizontal movements of the mouse detected by the X-Y motion sensor for scrolling through the list of character groups assigned to the other switch.")
1C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the states of the resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the	*Taraki discloses a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the states of the resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.* *See, e.g.*, Claims 1-15, Claim 4 ("said processor including means responsive to depression of the mouse control button for more than a predetermined time While the cursor is on an icon for rendering the icon responsive to any movement of the mouse in either of two opposite directions detected by the X-Y motion sensor for scrolling through the list of indicia assigned to the activated switch.").

	'200 Claim Language	**Disclosure**
	resolution value stored in the register.	
2.	The apparatus as claimed in claim 1, further comprising a button set for clicking an icon selected by the mouse cursor.	*Taraki discloses an apparatus as claimed in claim 1, further comprising a button set for clicking an icon selected by the mouse cursor.* *See, e.g.*, Figs, Abstract, Claims, Abstract ("If the mouse button is clicked on an icon the switch associated with the icon is activated…")
3.	The apparatus as claimed in claim 2, wherein the button set has a left button and a right button.	*Taraki discloses an apparatus as claimed in claim 2, wherein the button set has a left button and a right button.* *See, e.g.*, Fig 2.  FIG. 2

Invalidity of U.S. Patent No. 7,532,200 by U.S. Patent No. 6,532,001 ("Taraki")

	'200 Claim Language	**Disclosure**
4.	The apparatus as claimed in claim 1, wherein the switching circuit is configured on a lateral surface of the mouse.	*Taraki discloses an apparatus as claimed in claim 1, wherein the switch is configured on a lateral surface of the mouse.* The switches on the lateral surface of the mouse were well-known in the art at the time of the alleged invention and would have been obvious to combine with this art.
6.	An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	*To the extent the preamble is considered to limit the claim, Taraki discloses an apparatus for setting multi-stage displacement resolution of a mouse.* *See claim limitation 1.*
6A	a X-Y plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	*Taraki discloses a X-Y plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space.* *See claim limitation 1A.*
6B	an N-stage switch for setting a resolution value, the N-stage switching circuit having a switching button capable of being manually switched to one of the positions 1 to N, and accordingly activating a connected resolution setting pin to indicate a state, where N is a positive integer; and	*Taraki discloses an N-stage switch for setting a resolution value, the N-stage switching circuit having a switching button capable of being manually switched to one of the positions 1 to N, and accordingly activating a connected resolution setting pin to indicate a state, where N is a positive integer.* *See claim limitation 1B.*
6C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the	*Taraki discloses a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the state of the connected resolution setting*

	'200 Claim Language	**Disclosure**
	mouse micro controller determining the resolution value based on the state of the connected resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	*pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.* *See claim limitation 1C.*
7.	The apparatus as claimed in claim 6, further comprising a button set for clicking an icon selected by the mouse cursor.	*Taraki discloses an apparatus as claimed in claim 6, further comprising a button set for clicking an icon selected by the mouse cursor.* *See claim limitation 2.*
8.	The apparatus as claimed in claim 7, wherein the button set has a left button and a right button.	*Taraki discloses an apparatus as claimed in claim 7, wherein the button set has a left button and a right button.* *See claim limitation 3.*

Invalidity of U.S. Patent No. 7,532,200 by U.S. Patent No. 6,532,001 ("Taraki")

	'200 Claim Language	**Disclosure**
9.	The apparatus as claimed in claim 6, wherein the N-stage switch is configured on a lateral surface of the mouse.	*Taraki discloses an apparatus as claimed in claim 6, wherein the N-stage switch is configured on a lateral surface of the mouse.* N-Stage switch and switches on the lateral surface of the mouse were well-known in the art at the time of the alleged invention and would have been obvious to combine with this art.

Invalidity of U.S. Patent No. 7,532,200 by U.S. Patent No. 6,587,093 ("Shaw")

Based upon the claim interpretations Better Mouse Company, LLC ("BMC") appears to be asserting and the applications of those interpretations to Defendants' products in BMC's Infringement Contentions, U.S. Patent No. 6,587,093 to Shaw et al. issued on July 1, 2003 ("Shaw") anticipates and/or renders obvious, alone or in combination with other prior art identified in Defendants' Invalidity Contentions, the asserted claims as described in part below. This invalidity claim chart is not an admission by Defendants that the accused products, including any current or past versions of these products, are covered by, or infringe these claims, particularly when they are properly construed. Nothing in these contentions should be interpreted as an acquiescence to or assertion of a particular claim construction by Defendants.

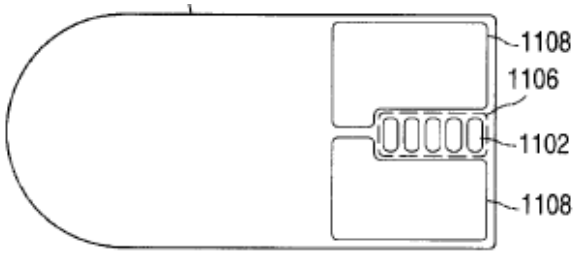
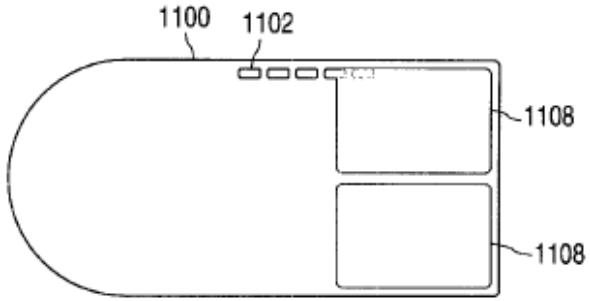
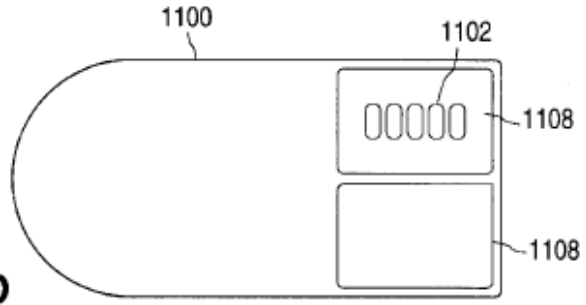
	'200 Claim Language	**Disclosure**
1.	1. An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	*To the extent the preamble is considered to limit the claim, Shaw discloses an apparatus that sets the multi-stage displacement resolution of a mouse.* *See, e.g.*, Figs and Abstract.
1A	a X-Y axis plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	*Shaw discloses an X-Y axis plane displacement detector that senses the distance and moving direction of the mouse.* *See, e.g.*, Abstract, Figs. 2C - 16C, 7:65-8:30 ("Mice conventionally include one or more buttons as well as a motion detector….") 4:45-53("In yet another alternative embodiment, disc 306 is capacitively coupled to a nearby grounded object. In yet another embodiment, a transcapacitance measurement may be done between the body of disc 306 and detector 310, possibly by driving a time-varying signal into disc 306 and measuring the amplitude of coupling of that signal onto detector 310. In any case, capacitance detector 310 measures the position of disc 306 by its capacitive effects, and the resulting signals are read by processor 312.") 6:55-60 ("The processor divides each plate capacitance measurement by the summed capacitance in order to normalize the capacitance measurements. These normalized measurements are invariant of the width of gap 406 of Fig 4, and are suitable for use in

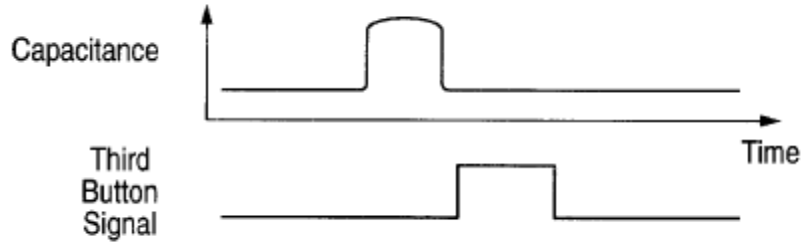
	'200 Claim Language	**Disclosure**
		the position computations previously discussed.")
1B	a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to generate the resolution value directly, each switch being coupled to a resolution setting pin, each resolution setting pin having a state determined by the switch coupled thereto; and	*Shaw discloses a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to generate the resolution value directly, each switch being coupled to a resolution setting pin, each resolution setting pin having a state determined by the switch coupled thereto.* *See, e.g.*, Abstract ("…capacitive switches to serve as mouse buttons…The pointing device further includes a capacitance measuring circuit and processor to measure variations of capacitance on the various capacitive elements and to determine the movement of and other activations of the mouse.") 6:5-16 ("Because disc rotation can be measured to much higher resolution than the notch spacing, it is possible to use much larger notches on disc 306, and correspondingly larger plates 320 and 322, than are feasible for the analogous notches and sensors of the optical encoder of FIG. 2A. Larger notches and plates allow mechanical tolerances of the assembly to be relaxed, yielding potentially lower costs. Even with larger notches and plates, a capacitive rotary encoder can produce higher-resolution data than an optical rotary encoder if a sufficiently high-resolution capacitance detector is used. Larger plates 320 and 322 also result in a larger capacitance signal which is easier for detector 310 to measure.") 7:4-12 ("Capacitance detectors 608 are placed in several locations proximate to ball 602. As the ball rolls, the conductive regions 604 will move from one capacitance detector to another; processor 610 correlates these signals to measure the movement of ball 602. Because the capacitance measurements vary linearly as conductive region 604 moves from one detector 608 to another processor 610 can interpolate in order to measure movement of the ball to very high resolution.") *See, e.g.*, 7:59-8:30, 10:7-56.

Invalidity of U.S. Patent No. 7,532,200 by U.S. Patent No. 6,587,093 ("Shaw")

	'200 Claim Language	**Disclosure**
1C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the states of the resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	*Shaw discloses a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the states of the resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.* *See, e.g.*, Abstract,; 1:10-2:32; 4:45-53; 6:5-60; 7:5-12; 7:59-8:30; 10:16-56; 14:37-65.
2.	The apparatus as claimed in claim 1, further comprising a button set for clicking an icon selected by the mouse cursor.	*Shaw discloses an apparatus as claimed in claim 1, further comprising a button set for clicking an icon selected by the mouse cursor.* *See, e.g.*, Figs, 8:31-46.

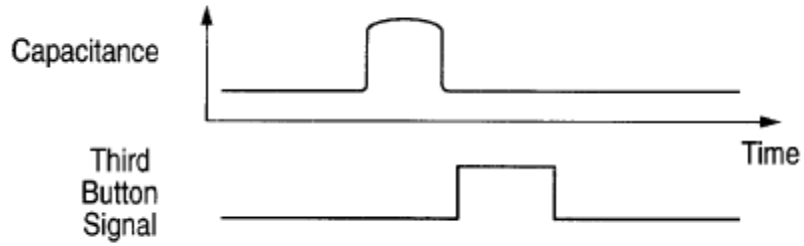
Invalidity of U.S. Patent No. 7,532,200 by U.S. Patent No. 6,587,093 ("Shaw")

	'200 Claim Language	Disclosure
3.	The apparatus as claimed in claim 2, wherein the button set has a left button and a right button.	*Shaw discloses an apparatus as claimed in claim 2, wherein the button set has a left button and a right button.* *See, e.g.*, Figs and corresponding text in the specification.  Fig. 11B  Fig. 11C  Fig. 11D

	'200 Claim Language	**Disclosure**
4.	The apparatus as claimed in claim 1, wherein the switching circuit is configured on a lateral surface of the mouse.	*Shaw discloses an apparatus as claimed in claim 1, wherein the switch is configured on a lateral surface of the mouse.* *See, e.g.*, Figs and corresponding text in the specification.12:38-60.  **Fig. 15**
6.	An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	*To the extent the preamble is considered to limit the claim, Shaw discloses an apparatus for setting multi-stage displacement resolution of a mouse.* *See claim limitation 1.*
6A	a X-Y plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	*Shaw discloses a X-Y plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space.* *See claim limitation 1A.*

Invalidity of U.S. Patent No. 7,532,200 by U.S. Patent No. 6,587,093 ("Shaw")

	'200 Claim Language	Disclosure
6B	an N-stage switch for setting a resolution value, the N-stage switching circuit having a switching button capable of being manually switched to one of the positions 1 to N, and accordingly activating a connected resolution setting pin to indicate a state, where N is a positive integer; and	*Shaw discloses an N-stage switch for setting a resolution value, the N-stage switching circuit having a switching button capable of being manually switched to one of the positions 1 to N, and accordingly activating a connected resolution setting pin to indicate a state, where N is a positive integer.* *See claim limitation 1B.*
6C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the state of the connected resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	*Shaw discloses a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the state of the connected resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.* *See claim limitation 1C.*
7.	The apparatus as claimed in claim 6,	*Shaw discloses an apparatus as claimed in claim 6, further comprising a button set for*

	'200 Claim Language	**Disclosure**
	further comprising a button set for clicking an icon selected by the mouse cursor.	*clicking an icon selected by the mouse cursor.* *See claim limitation 2.*
8.	The apparatus as claimed in claim 7, wherein the button set has a left button and a right button.	*Shaw discloses an apparatus as claimed in claim 7, wherein the button set has a left button and a right button.* *See claim limitation 3.*
9.	The apparatus as claimed in claim 6, wherein the N-stage switch is configured on a lateral surface of the mouse.	*Shaw discloses an apparatus as claimed in claim 6, wherein the N-stage switch is configured on a lateral surface of the mouse.* *See, e.g.*, Figs and corresponding text in the specification.12:38-60.  **Fig. 15**

Invalidity of U.S. Patent No. 7,532,200 by Requirements-analysis for a USB Keyboard microcontroller ("USB PS/2 Mouse")

Based upon the claim interpretations Better Mouse Company, LLC ("BMC") appears to be asserting and the applications of those interpretations to Defendants' products in BMC's Infringement Contentions, Requirements-analysis for a USB keyboard microcontroller published December 20, 1996 Digital Systems Group, Department of Electrical Engineering, Eindhoven University of Technology ("USB PS/2 Mouse") anticipates and/or renders obvious, alone or in combination with other prior art identified in Defendants' Invalidity Contentions, the asserted claims as described in part below. This invalidity claim chart is not an admission by Defendants that the accused products, including any current or past versions of these products, are covered by, or infringe these claims, particularly when they are properly construed. Nothing in these contentions should be interpreted as an acquiescence to or assertion of a particular claim construction by Defendants.

	'200 Claim Language	**Disclosure**
1.	1. An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	*To the extent the preamble is considered to limit the claim, USB PS/2 Mouse discloses an apparatus that sets the multi-stage displacement resolution of a mouse.* *See, e.g.*, Abstract, Introduction.
1A	a X-Y axis plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	*USB PS/2 Mouse discloses an X-Y axis plane displacement detector that senses the distance and moving direction of the mouse.* *See, e.g.*, Abstract, Introduction, Section 3.4.
1B	a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to generate the resolution value directly, each switch being coupled to a resolution setting pin, each resolution setting pin having a state determined by the switch coupled thereto; and	*USB PS/2 Mouse discloses a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to generate the resolution value directly, each switch being coupled to a resolution setting pin, each resolution setting pin having a state determined by the switch coupled thereto.* *See, e.g.*, Abstract, Introduction, Sections 3.4 and 4.
1C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement	*USB PS/2 Mouse discloses a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro*

	'200 Claim Language	**Disclosure**
	detector and the switching circuit, the mouse micro controller determining the resolution value based on the states of the resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	*controller determining the resolution value based on the states of the resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.* *See, e.g.*, Abstract, Introduction, Sections 3.4 and 4.
2.	The apparatus as claimed in claim 1, further comprising a button set for clicking an icon selected by the mouse cursor.	*USB PS/2 Mouse discloses an apparatus as claimed in claim 1, further comprising a button set for clicking an icon selected by the mouse cursor.* *See, e.g.*, Abstract, Introduction, Sections 3.4 and 4.
3.	The apparatus as claimed in claim 2, wherein the button set has a left button and	*USB PS/2 Mouse discloses an apparatus as claimed in claim 2, wherein the button set*

	'200 Claim Language	**Disclosure**
	a right button.	*has a left button and a right button.* *See, e.g.*, Abstract, Introduction, Sections 3.4 and 4.
4.	The apparatus as claimed in claim 1, wherein the switching circuit is configured on a lateral surface of the mouse.	*USB PS/2 Mouse discloses an apparatus as claimed in claim 1, wherein the switch is configured on a lateral surface of the mouse.* *See, e.g.*, Abstract, Introduction, Sections 3.4 and 4. Switches on the lateral surface of the mouse were well-known in the art at the time of the alleged invention and would have been obvious to combine with this art.
6.	An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	*To the extent the preamble is considered to limit the claim, USB PS/2 Mouse discloses an apparatus for setting multi-stage displacement resolution of a mouse.* *See claim limitation 1.*
6A	a X-Y plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	*USB PS/2 Mouse discloses a X-Y plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space.* *See claim limitation 1A.*
6B	an N-stage switch for setting a resolution value, the N-stage switching circuit having a switching button capable of being	*USB PS/2 Mouse discloses an N-stage switch for setting a resolution value, the N-stage switching circuit having a switching button capable of being manually switched to one of the positions 1 to N, and accordingly activating a connected resolution setting pin to*

	'200 Claim Language	**Disclosure**
	manually switched to one of the positions 1 to N, and accordingly activating a connected resolution setting pin to indicate a state, where N is a positive integer; and	*indicate a state, where N is a positive integer.* *See claim limitation 1B.*
6C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the state of the connected resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	*USB PS/2 Mouse discloses a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the state of the connected resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.* *See claim limitation 1C.*
7.	The apparatus as claimed in claim 6, further comprising a button set for clicking an icon selected by the mouse cursor.	*USB PS/2 Mouse discloses an apparatus as claimed in claim 6, further comprising a button set for clicking an icon selected by the mouse cursor.* *See claim limitation 2.*

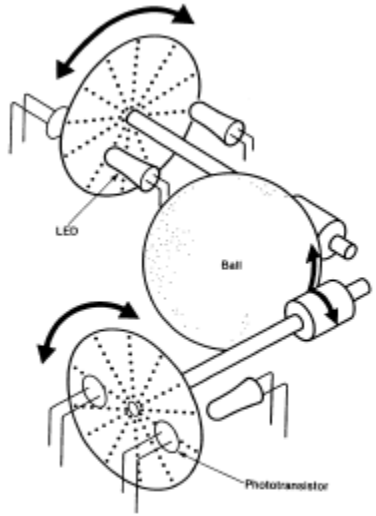
Invalidity of U.S. Patent No. 7,532,200 by Requirements-analysis for a USB Keyboard microcontroller ("USB PS/2 Mouse")

	'200 Claim Language	**Disclosure**
8.	The apparatus as claimed in claim 7, wherein the button set has a left button and a right button.	*USB PS/2 Mouse discloses an apparatus as claimed in claim 7, wherein the button set has a left button and a right button.* *See claim limitation 3.*
9.	The apparatus as claimed in claim 6, wherein the N-stage switch is configured on a lateral surface of the mouse.	*USB PS/2 Mouse discloses an apparatus as claimed in claim 6, wherein the N-stage switch is configured on a lateral surface of the mouse.* *See, e.g.,* Abstract, Introduction, Sections 3.4 and 4. N-Stage switch and switches on the lateral surface of the mouse were well-known in the art at the time of the alleged invention and would have been obvious to combine with this art.

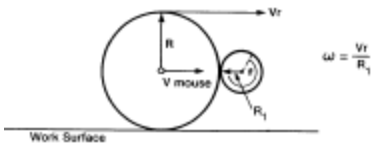
Invalidity of U.S. Patent No. 7,532,200 by Computer Peripherals Undergraduate course at Nanyang Technology University, Singapore

Based upon the claim interpretations Better Mouse Company, LLC ("BMC") appears to be asserting and the applications of those interpretations to Defendants' products in BMC's Infringement Contentions, Computer Peripherals Undergraduate Course at Nanyang Technology University, Singapore available on the web at http://www.lintech.org/comp-per/ dated October 16, 2001 ("Lintech") anticipates and/or renders obvious, alone or in combination with other prior art identified in Defendants' Invalidity Contentions, the asserted claims as described in part below. This invalidity claim chart is not an admission by Defendants that the accused products, including any current or past versions of these products, are covered by, or infringe these claims, particularly when they are properly construed. Nothing in these contentions should be interpreted as an acquiescence to or assertion of a particular claim construction by Defendants.

	'200 Claim Language	**Disclosure**
1.	1. An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	*To the extent the preamble is considered to limit the claim, Lintech discloses an apparatus that sets the multi-stage displacement resolution of a mouse.* *See, e.g.*, Chapter 5, 5.1 History at Mouse 1. ("Most mice have a resolution of 100 to 200 cpi. The higher the resolution, the less motion is required to move the cursor a given distance, but the harder it is to position the mouse on an exact point. The resolution can be decreased by the software to make accurate positioning easier by dividing the count from the mouse.")
1A	a X-Y axis plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	*Lintech discloses an X-Y axis plane displacement detector that senses the distance and moving direction of the mouse.* *See, e.g.*, Chapter 5, at Mouse 2 ("**Types of Motion**. Mice sense their displacement and direction of motion across a work surface. This motion can be sensed in one of two ways: relative to the work surface or relative to the mouse. **Motion Relative to the Work Surface**. When a mouse senses motion relative to a work surface, its output corresponds to its motion relative to the X and Y axes of the surface. The surface is usually printed with a regular pattern of lines or dots; sensing means within the mouse detect its motion over the patterned surface. The output is

	’200 Claim Language	Disclosure
		independent of the orientation or rotation of the mouse, within limits, and is related only to its motion over the work surface. **Motion Relative to the Mouse**. When the mouse senses motion relative to itself, it does so independently of its orientation on the work surface. It can be moved in any direction, or rotated, and its output will correspond only to the motion relative to its own X and Y axes. Its orientation with respect to the work surface is unimportant"). Chapter 5, at Mouse 2-3 (“Motion Tracking Methods. Mechanical mice use wheels or balls to convert their linear motion across a surface into the rotary motion of commutators or shaft encoders.”)  Figure 0-1 A Typical mechanical mouse with ball and shafts

Invalidity of U.S. Patent No. 7,532,200 by Computer Peripherals Undergraduate course at Nanyang Technology University, Singapore

	’200 Claim Language	Disclosure
		 Figure 0-2 Ball and Shaft Chapter 5, at Mouse 2-3 (“How the Motion is Transmitted to the Sensors. The shafts that are rotated directly or indirectly by a wheel or ball are connected directly to motion sensors. These sensors can take a variety of forms and can be classified as one of two types: resistive sensing elements or optical interrupters.”)
1B	a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to generate the resolution value directly, each switch being coupled to a resolution setting pin, each resolution setting pin having a state determined by the switch coupled thereto; and	*Lintech discloses a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to generate the resolution value directly, each switch being coupled to a resolution setting pin, each resolution setting pin having a state determined by the switch coupled thereto*. *See, e.g.*, Chapter 5, at Mouse 12 (“Common Protocols. Serial mice transmit data in a variety of packet sizes and protocols. The most common packet sizes include either three or five bytes of data; the data is transmitted in a sequence that first sends sync and switch information, then X and Y motion information. The most common mouse protocols are listed below.”)

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<table>
<tr><th></th><th>’200 Claim Language</th><th>Disclosure</th></tr>
<tr><td></td><td></td><td>
Table 0-4 Microsoft Protocol
<table>
<tr><td>Bit No.</td><td>MSB 6</td><td>5</td><td>4</td><td>3</td><td>2</td><td>1</td><td>LSB 0</td></tr>
<tr><td>Byte 1</td><td>1</td><td>L</td><td>R</td><td>Y7</td><td>Y6</td><td>X7</td><td>X6</td></tr>
<tr><td>Byte 2</td><td>0</td><td>X5</td><td>X4</td><td>X3</td><td>X2</td><td>X1</td><td>X0</td></tr>
<tr><td>Byte 3</td><td>0</td><td>Y5</td><td>Y4</td><td>Y3</td><td>Y2</td><td>Y1</td><td>Y0</td></tr>
</table>
Parity: None
L, R: Left, right switches; 1 = switch pressed
X0-X7: X distance
Y0-Y7: Y distance

See, e.g., Chapter 5, at Mouse 15 (emphasis added) (“Movements of the joystick shaft in any direction will, in general, cause both potentiometers' spindles to turn, as is perhaps clearer in the view down the joystick shaft from above in Figure 0-12(c). A voltage is presented to the center terminal of both potentiometers. The two end terminals of each potentiometer are read to obtain the X and Y values. If a button is present then this same voltage is applied to the button's switch and the other side of the switch is read. Then the cable to the joystick contains:

• voltage out

• two X voltage returns (analogue values)

• two Y voltage returns (analogue values)

• one voltage return for each button (digital on/off value).

The joystick just described is an analogue joystick, as it provides an analogue (continuous) voltage to specify the X and Y positions. Digital joysticks also exist and, instead of moving the spindles of two potentiometers, they operate discrete switches.
</td></tr>
</table>

Invalidity of U.S. Patent No. 7,532,200 by Computer Peripherals Undergraduate course at Nanyang Technology University, Singapore

	’200 Claim Language	Disclosure
		For this reason they are sometimes referred to as joyswitches. The joystick shaft is moved in the same way as before but now makes contact with four switches positioned at the top, bottom, left and right locations in the unit's case. **Some have eight positions for greater resolution of direction**. The types with four switches are arranged so that, for example, in the North-West position, both the North and the West switches are activated and so eight different directions are possible. A similar arrangement with the eight switch variety gives sixteen discrete values for the joystick direction. This digital joystick facility is alternately provided by a pad of four pressure switches arranged at the four compass positions. This produces the same information as the digital joystick and, by pressing two adjacent switches simultaneously, a total of eight directions can be input.”) Chapter 5 at Mouse 11.

Invalidity of U.S. Patent No. 7,532,200 by Computer Peripherals Undergraduate course at Nanyang Technology University, Singapore

<table>
<tr><th></th><th>’200 Claim Language</th><th>Disclosure</th></tr>
<tr><td></td><td></td><td>5.6.2.2 Microsoft Connector.
MicroSoft uses a 9-pin mini-DIN connector; details are shown in Table 0-2 MicroSoft Mini-DIN Pinouts.
Table 0-2 MicroSoft Mini-DIN Pinouts
<table><tr><th>Pin Number</th><th>Function</th></tr><tr><td>1</td><td>+5V</td></tr><tr><td>2</td><td>Xa</td></tr><tr><td>3</td><td>Xb</td></tr><tr><td>4</td><td>Ya</td></tr><tr><td>5</td><td>Yb</td></tr><tr><td>6</td><td>switch 1</td></tr><tr><td>7</td><td>switch 2</td></tr><tr><td>8</td><td>switch 3</td></tr><tr><td>9</td><td>Ground</td></tr></table></td></tr>
<tr><td>1C</td><td>a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the states of the resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller</td><td>Lintech discloses a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the states of the resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the</td></tr>
</table>

	'200 Claim Language	**Disclosure**
	responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	*resolution value stored in the register.* *See, e.g.*, Chapter 5, at Mouse 9 ("**Electrical Characteristics**. Serial mice will usually have an **internal microcontroller or state machine** that can interpret the motion and switch information and convert it to a simple serial output. Serial mice generate outputs that are in one of two forms: RS-232 or TTL voltage levels.") *See, e.g.*, Chapter 5, at Mouse 9 ("The flip-flop detects the direction of motion by sensing the state of signal A at the rising edge of signal B. The flip-flop output provides a direction control signal to a counter, which counts the pulses. The counter can be cleared by the microprocessor by writing to the selected address. The counter then accumulates pulses, counting up or down depending on the phase relationship of the two inputs. The microprocessor can read the position via the three-state buffer (a basic input port) and then clear the count. The size of the counter determines how much motion can be accumulated between reads.") Chapter 5, at Mouse 9 ("Hewlett-Packard's HCTL-2000 IC provides a single-chip solution for interfacing quadrature signals to a microprocessor system. It includes digital noise filters, quadrature decoders for full 4x resolution (both edges of both signals counted), and a 12 bit up/down counter. An 8-bit bus interface is included, which allows the counter to be read in two parts. The electrical outputs from mice usually take one of two forms: parallel or serial data. A mouse with parallel outputs presents its motion and switch information to the host computer over an interface that consists of one wire or data bit for each bit, or piece, of information. A three button mouse would have four wires for the X and Y motion information and three wires for the switch closure information, and additional wires for its supply voltage and ground.

<table>
<tr><th></th><th>’200 Claim Language</th><th>Disclosure</th></tr>
<tr><td></td><td></td><td>A serial mouse presents its motion and switch data to the host over a single wire by using a specific serial communications protocol.”)

Chapter 5 at Mouse 11.

5.6.2.2 Microsoft Connector.
MicroSoft uses a 9-pin mini-DIN connector; details are shown in Table 0-2 MicroSoft Mini-DIN Pinouts.
Table 0-2 MicroSoft Mini-DIN Pinouts
<table><tr><th>Pin Number</th><th>Function</th></tr><tr><td>1</td><td>+5V</td></tr><tr><td>2</td><td>Xa</td></tr><tr><td>3</td><td>Xb</td></tr><tr><td>4</td><td>Ya</td></tr><tr><td>5</td><td>Yb</td></tr><tr><td>6</td><td>switch 1</td></tr><tr><td>7</td><td>switch 2</td></tr><tr><td>8</td><td>switch 3</td></tr><tr><td>9</td><td>Ground</td></tr></table></td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td>2.</td><td>The apparatus as claimed in claim 1, further comprising a button set for clicking</td><td>Lintech discloses an apparatus as claimed in claim 1, further comprising a button set</td></tr>
</table>

<table>
<tr><th></th><th>'200 Claim Language</th><th>Disclosure</th></tr>
<tr><td></td><td>an icon selected by the mouse cursor.</td><td>for clicking an icon selected by the mouse cursor.

5.7 Advantages and Disadvantages of Mice and TrackBalls

Table 0-5 Advantages and Disadvantages of Mice
<table><tr><th>Advantages</th><th>Disadvantages</th></tr><tr><td>Work in small spaces</td><td>Require space beside keyboard</td></tr><tr><td>Can modify control-display gain</td><td>May have low resolution and information transmission rates</td></tr><tr><td>Inexpensive</td><td>Unnatural drawing movements</td></tr><tr><td>User can keep eyes on screen</td><td>Relative mode only</td></tr><tr><td>Mechanical mice use any surface</td><td>Optical mice require grid</td></tr><tr><td>Optical mice are noiseless</td><td>Mechanical mice produce noise and pick up debris</td></tr></table>
Table 0-6 Advantages and Disadvantages of the Trackball
<table><tr><th>Advantages</th><th>Disadvantages</th></tr><tr><td>Direct tactile feedback</td><td>Not well suited for drawing</td></tr><tr><td>High resolution</td><td>No three dimensional input</td></tr><tr><td>Requires little space</td><td></td></tr><tr><td>Allows rapid cursor positioning</td><td></td></tr><tr><td>Can modify control display gain</td><td></td></tr></table>
See, e.g., Chapter 5, 5.1 History ("Mice generally include one to four push buttons on the upper surface of the housing. A button is pushed to select the object pointed to, such as an item in a menu, or to mark a position, such as the start of a text block to be</td></tr>
</table>

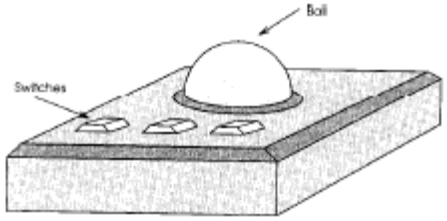
<table>
<tr><th></th><th>’200 Claim Language</th><th>Disclosure</th></tr>
<tr><td></td><td></td><td>moved. Push buttons can also be used for other application-dependent functions.”)</td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td>3.</td><td>The apparatus as claimed in claim 2, wherein the button set has a left button and a right button.</td><td>Lintech discloses an apparatus as claimed in claim 2, wherein the button set has a left button and a right button.

See, e.g., Chapter 5, 5.1 History (“Mice generally include one to four push buttons on the upper surface of the housing. A button is pushed to select the object pointed to, such as an item in a menu, or to mark a position, such as the start of a text block to be moved. Push buttons can also be used for other application-dependent functions.”)

Chapter 5 at Mouse 11.

Table 0-1 Quad Pinouts
<table><tr><th>Pin Number</th><th>Mouse Systems</th><th>Logitech</th><th>Apple</th></tr><tr><td>1</td><td>+5V</td><td>+5V</td><td>Ground</td></tr><tr><td>2</td><td>Xa</td><td>Ya</td><td>+5V</td></tr><tr><td>3</td><td>Xb</td><td>Yb</td><td>Ground</td></tr><tr><td>4</td><td>Ya</td><td>Xb</td><td>Xa</td></tr><tr><td>5</td><td>Yb</td><td>Xa</td><td>Xb</td></tr><tr><td>6</td><td>L switch</td><td>Ground</td><td>Ground</td></tr><tr><td>7</td><td>M switch</td><td>M switch</td><td>Switch</td></tr><tr><td>8</td><td>R switch</td><td>R switch</td><td>Yb</td></tr><tr><td>9</td><td>Ground</td><td>L switch</td><td>Ya</td></tr></table></td></tr>
</table>

Invalidity of U.S. Patent No. 7,532,200 by Computer Peripherals Undergraduate course at Nanyang Technology University, Singapore

	'200 Claim Language	**Disclosure**
		A person of ordinary skill in the art would understand that if there are push bottons on the upper surface, one will be a left button and another will be a right button.  Figure 0-5 A trackball
4.	The apparatus as claimed in claim 1, wherein the switching circuit is configured on a lateral surface of the mouse.	*Lintech discloses an apparatus as claimed in claim 1, wherein the switch is configured on a lateral surface of the mouse.* *See, e.g.,* Chapter 5, 5.1 History ("Mice generally include **one to four push buttons** on the upper surface of the housing. A button is pushed to select the object pointed to, such as an item in a menu, or to mark a position, such as the start of a text block to be moved. Push buttons can also be used for other application-dependent functions.")
6.	An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	*To the extent the preamble is considered to limit the claim, Lintech discloses an apparatus for setting multi-stage displacement resolution of a mouse.* *See claim limitation 1.*

Invalidity of U.S. Patent No. 7,532,200 by Computer Peripherals Undergraduate course at Nanyang Technology University, Singapore

<table>
<tr><th></th><th>’200 Claim Language</th><th>Disclosure</th></tr>
<tr><td>6A</td><td>a X-Y plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;</td><td>Lintech discloses a X-Y plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space.

See claim limitation 1A.</td></tr>
<tr><td>6B</td><td>an N-stage switch for setting a resolution value, the N-stage switching circuit having a switching button capable of being manually switched to one of the positions 1 to N, and accordingly activating a connected resolution setting pin to indicate a state, where N is a positive integer; and</td><td>Lintech discloses an N-stage switch for setting a resolution value, the N-stage switching circuit having a switching button capable of being manually switched to one of the positions 1 to N, and accordingly activating a connected resolution setting pin to indicate a state, where N is a positive integer.

See claim limitation 1B.

See, e.g., Chapter 5 at Mouse 12.

Table 0-4 Microsoft Protocol
<table><tr><td>Bit No.</td><td>MSB 6</td><td>5</td><td>4</td><td>3</td><td>2</td><td>1</td><td>LSB 0</td></tr><tr><td>Byte 1</td><td>1</td><td>L</td><td>R</td><td>Y7</td><td>Y6</td><td>X7</td><td>X6</td></tr><tr><td>Byte 2</td><td>0</td><td>X5</td><td>X4</td><td>X3</td><td>X2</td><td>X1</td><td>X0</td></tr><tr><td>Byte 3</td><td>0</td><td>Y5</td><td>Y4</td><td>Y3</td><td>Y2</td><td>Y1</td><td>Y0</td></tr></table>Parity: None
L, R: Left, right switches; 1 = switch pressed
X0-X7: X distance
Y0-Y7: Y distance

The left and right switches work as a switching circuit, that is detected by 01 or 10 values since only one switch is pressed at a time for the L, R positions in the Byte.</td></tr>
</table>

Invalidity of U.S. Patent No. 7,532,200 by Computer Peripherals Undergraduate course at Nanyang Technology University, Singapore

	’200 Claim Language	Disclosure
6C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the state of the connected resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	*Lintech discloses a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the state of the connected resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.* *See claim limitation 1C.*
7.	The apparatus as claimed in claim 6, further comprising a button set for clicking an icon selected by the mouse cursor.	*Lintech discloses an apparatus as claimed in claim 6, further comprising a button set for clicking an icon selected by the mouse cursor.* *See claim limitation 2.*
8.	The apparatus as claimed in claim 7, wherein the button set has a left button and	*Lintech discloses an apparatus as claimed in claim 7, wherein the button set has a left button and a right button.*

Invalidity of U.S. Patent No. 7,532,200 by Computer Peripherals Undergraduate course at Nanyang Technology University, Singapore

	'200 Claim Language	**Disclosure**
	a right button.	*See claim limitation 3.*
9.	The apparatus as claimed in claim 6, wherein the N-stage switch is configured on a lateral surface of the mouse.	*Lintech discloses an apparatus as claimed in claim 6, wherein the N-stage switch is configured on a lateral surface of the mouse.* *See, e.g.,* Chapter 5, 5.1 History ("Mice generally include **one to four push buttons** on the upper surface of the housing. A button is pushed to select the object pointed to, such as an item in a menu, or to mark a position, such as the start of a text block to be moved. Push buttons can also be used for other application-dependent functions.")

Invalidity of U.S. Patent No. 7,532,200 by Mystify Razer Boomslang 2100 mouse product

Based upon the claim interpretations Better Mouse Company, LLC ("BMC") appears to be asserting and the applications of those interpretations to Defendants' products in BMC's Infringement Contentions, the Mystify Razer Boomslang 2100 mouse product, available at least as early as June 11, 2003 anticipates and/or renders obvious, alone or in combination with other prior art identified in Defendants' Invalidity Contentions, the asserted claims as described in part below. This invalidity claim chart is not an admission by Defendants that the accused products, including any current or past versions of these products, are covered by, or infringe these claims, particularly when they are properly construed. Nothing in these contentions should be interpreted as an acquiescence to or assertion of a particular claim construction by Defendants.

	'200 Claim Language	**Disclosure**
1.	1. An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	*See, e.g.,* Mystify Razer Boomslang 2100 Product Manual, http://ftp.terratec.com/Discontinued_Products/GamingSystems/MystifyRazer2100/Manual/RazerBoomslang2100_Manual_GB.pdf.
1A	a X-Y axis plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	*See, e.g.,* Mystify Razer Boomslang 2100 Product Manual, http://ftp.terratec.com/Discontinued_Products/GamingSystems/MystifyRazer2100/Manual/RazerBoomslang2100_Manual_GB.pdf.
1B	a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to generate the resolution value directly, each switch being coupled to a resolution setting pin, each resolution setting pin having a state determined by the switch coupled thereto; and	*See, e.g.,* Mystify Razer Boomslang 2100 Product Manual, http://ftp.terratec.com/Discontinued_Products/GamingSystems/MystifyRazer2100/Manual/RazerBoomslang2100_Manual_GB.pdf at 7-8.
1C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the	*See, e.g.,* Mystify Razer Boomslang 2100 Product Manual, http://ftp.terratec.com/Discontinued_Products/GamingSystems/MystifyRazer2100/Manual/RazerBoomslang2100_Manual_GB.pdf at 7-8.

	'200 Claim Language	**Disclosure**
	mouse micro controller determining the resolution value based on the states of the resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	
2.	The apparatus as claimed in claim 1, further comprising a button set for clicking an icon selected by the mouse cursor.	*See, e.g.*, Mystify Razer Boomslang 2100 Product Manual, http://ftp.terratec.com/Discontinued_Products/GamingSystems/MystifyRazer2100/Manual/RazerBoomslang2100_Manual_GB.pdf.
3.	The apparatus as claimed in claim 2, wherein the button set has a left button and a right button.	*See, e.g.*, Mystify Razer Boomslang 2100 Product Manual, http://ftp.terratec.com/Discontinued_Products/GamingSystems/MystifyRazer2100/Manual/RazerBoomslang2100_Manual_GB.pdf.

Invalidity of U.S. Patent No. 7,532,200 by Mystify Razer Boomslang 2100 mouse product

	’200 Claim Language	Disclosure
4.	The apparatus as claimed in claim 1, wherein the switching circuit is configured on a lateral surface of the mouse.	*See, e.g.*, Mystify Razer Boomslang 2100 Product Manual, http://ftp.terratec.com/Discontinued_Products/GamingSystems/MystifyRazer2100/Manual/RazerBoomslang2100_Manual_GB.pdf at 7-8.
6.	An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	*See, e.g.*, Mystify Razer Boomslang 2100 Product Manual, http://ftp.terratec.com/Discontinued_Products/GamingSystems/MystifyRazer2100/Manual/RazerBoomslang2100_Manual_GB.pdf.
6A	a X-Y plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	*See, e.g.*, Mystify Razer Boomslang 2100 Product Manual, http://ftp.terratec.com/Discontinued_Products/GamingSystems/MystifyRazer2100/Manual/RazerBoomslang2100_Manual_GB.pdf.
6B	an N-stage switch for setting a resolution value, the N-stage switching circuit having a switching button capable of being manually switched to one of the positions 1 to N, and accordingly activating a connected resolution setting pin to indicate a state, where N is a positive integer; and	*See, e.g.*, Mystify Razer Boomslang 2100 Product Manual, http://ftp.terratec.com/Discontinued_Products/GamingSystems/MystifyRazer2100/Manual/RazerBoomslang2100_Manual_GB.pdf at 7-8.
6C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the state of the connected resolution setting pins, setting a mouse resolution based on the resolution	*See, e.g.*, Mystify Razer Boomslang 2100 Product Manual, http://ftp.terratec.com/Discontinued_Products/GamingSystems/MystifyRazer2100/Manual/RazerBoomslang2100_Manual_GB.pdf at 7-8.

	'200 Claim Language	**Disclosure**
	value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	
7.	The apparatus as claimed in claim 6, further comprising a button set for clicking an icon selected by the mouse cursor.	*See, e.g.*, Mystify Razer Boomslang 2100 Product Manual, http://ftp.terratec.com/Discontinued_Products/GamingSystems/MystifyRazer2100/Manual/RazerBoomslang2100_Manual_GB.pdf.
8.	The apparatus as claimed in claim 7, wherein the button set has a left button and a right button.	*See, e.g.*, Mystify Razer Boomslang 2100 Product Manual, http://ftp.terratec.com/Discontinued_Products/GamingSystems/MystifyRazer2100/Manual/RazerBoomslang2100_Manual_GB.pdf.
9.	The apparatus as claimed in claim 6, wherein the N-stage switch is configured on a lateral surface of the mouse.	*See, e.g.*, Mystify Razer Boomslang 2100 Product Manual, http://ftp.terratec.com/Discontinued_Products/GamingSystems/MystifyRazer2100/Manual/RazerBoomslang2100_Manual_GB.pdf at 7-8.

Invalidity of U.S. Patent No. 7,532,200 by PS 2 Mouse Interfacing Systems

Based upon the claim interpretations Better Mouse Company, LLC ("BMC") appears to be asserting and the applications of those interpretations to Defendants' products in BMC's Infringement Contentions, PS/2 Mouse Interface Article written on April 1, 2003 ("PS/2 Mouse Interface") anticipates and/or renders obvious, alone or in combination with other prior art identified in Defendants' Invalidity Contentions, the asserted claims as described in part below. This invalidity claim chart is not an admission by Defendants that the accused products, including any current or past versions of these products, are covered by, or infringe these claims, particularly when they are properly construed. Nothing in these contentions should be interpreted as an acquiescence to or assertion of a particular claim construction by Defendants.

	'200 Claim Language	**Disclosure**
1.	1. An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	*To the extent the preamble is considered to limit the claim, PS/2 Mouse Interface discloses an apparatus that sets the multi-stage displacement resolution of a mouse.* *See, e.g.*, General Description ("The PS/2 mouse interface uses a bidirectional serial protocol to transmit movement and button-position data to the computer's auxiliary device controller (keyboard controller). The computer, in turn, may send a number of commands to the mouse to set the report rate, resolution, reset the mouse, disable the mouse, etc. The computer also provides the mouse with an overload-protected 5V power supply.")
1A	a X-Y axis plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	*PS/2 Mouse Interface discloses an X-Y axis plane displacement detector that senses the distance and moving direction of the mouse.* *See, e.g.*, Inputs, Resolution, and Scaling ("The standard mouse has two counters that keep track of movement: the X-movement counter and the Y-movement counter. These are 9-bit 2's complement values and each has an associated overflow flag. Their contents, along with the state of the three mouse buttons, are sent to the host in the form of a 3-byte movement data packet (as described in the next section.) The movement counters represent the amount of movement that has occurred since the last movement data packet was sent to the host (ie, they do not represent absolute positions.) When the mouse reads its inputs, it records the current state of its buttons and checks

Invalidity of U.S. Patent No. 7,532,200 by PS 2 Mouse Interfacing Systems

	’200 Claim Language	Disclosure
		for movement. If movement has occurred it increments (for +X or +Y movement) or decrements (for -X or -Y movement) its X and/or Y movement counters. If either of the counters has overflowed, it sets the appropriate overflow flag.”)
1B	a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to generate the resolution value directly, each switch being coupled to a resolution setting pin, each resolution setting pin having a state determined by the switch coupled thereto; and	*PS/2 Mouse Interface discloses a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to generate the resolution value directly, each switch being coupled to a resolution setting pin, each resolution setting pin having a state determined by the switch coupled thereto*. *See, e.g.,* 1 :16-19 ("The parameter that determines the amount by which the movement counters are incremented/decremented is the *resolution*. The default resolution is 4 counts/mm and the host may change that value using the "Set Resolution" (0xE8) command. There is a parameter that does not effect the movement counters, but does effect the reported(1) value of these counters. This parameter is *scaling*. By default, the mouse uses 1:1 scaling, which has no effect on the reported mouse movement. However, the host may select 2:1 scaling by sending the "Set Scaling 2:1" (0xE7) command. If 2:1 scaling is enabled, the mouse will apply the following algorithm to the counters before sending their contents to the host:

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	’200 Claim Language	Disclosure

Movement Counter	Reported Movement
0	0
1	1
2	1
3	3
4	6
5	9
N > 5	2 * N

”).

- E8h (Set Resolution) - The mouse responds with acknowledge (FAh) then reads one byte from the host and again responds with acknowledge (FAh) then resets its movement counters. The byte read from the host determines the resolution as follows:

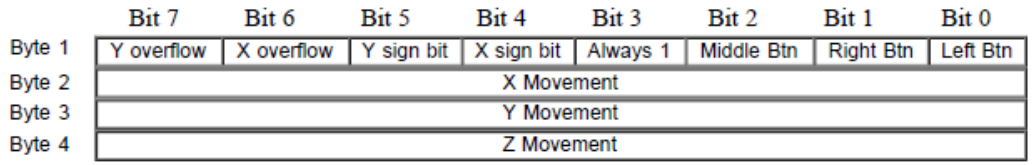
Byte Read from Host	Resolution
0x00	1 count/mm
0x01	2 count/mm
0x02	4 count/mm
0x03	8 count/mm

Movement Data Packet:

The standard PS/2 mouse sends movement/button information to the host using the following 3-byte packet (4):

	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
Byte 1	Y overflow	X overflow	Y sign bit	X sign bit	Always 1	Middle Btn	Right Btn	Left Btn
Byte 2	X Movement							
Byte 3	Y Movement							

	’200 Claim Language	Disclosure
		“A popular extension to the standard PS/2 mouse is the Microsoft Intellimouse. This includes support for a total of five mouse buttons and three axises of movement (right-left, up-down, and a scrolling wheel). These additional features require the use of a 4-byte movement data packet rather than the standard 3-byte packet. Since standard PS/2 mouse drivers cannot recognize this packet format, the Microsoft Intellimouse is required to operate exactly like a standard PS/2 mouse unless it knows the drivers support the extended packet format. This way, if a Microsoft Intellimouse is used on a computer which only supports the standard PS/2 mouse, the Microsoft Intellimouse will still function, except for its scrolling wheel and 4th and 5th buttons. After power-on or reset the Microsoft Intellimouse operates just like a standard PS/2 mouse (ie, it uses a 3-byte movement data packet, responds to all commands in the same way as a standard PS/2 mouse, and reports a device ID of 00h.) To enter "scrolling wheel" mode, the host sends the following command sequence: Set sample rate 200 Set sample rate 100 Set sample rate 80 The host then issues the "Get device ID" command and waits for a response. If a standard PS/2 mouse (ie, non-Intellimouse) is attached, it will respond with a device ID of 00h. In this case, the host will recognize the fact that the mouse does have a scrolling wheel and will continue to treat it as a standard PS/2 mouse. However, if a Microsoft Intellimouse is attached, it will respond with an ID of 03h. This tells the host that the attached pointing device has a scrolling wheel and the host will then expect the mouse to use the following 4-byte movement data packet:

	’200 Claim Language	Disclosure
		
1C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the states of the resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	*PS/2 Mouse Interface discloses a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the states of the resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.* *See, e.g.*, Abstract (“This article attempts to explain every aspect of the PS/2 mouse interface including the physical and electrical interface, low-level protocol, modes of operation, commands, and extensions. All code samples involving the mouse encoder are written in assembly for Microchip's PIC microcontrollers. All code samples related to the auxiliary device controller (keyboard controller) are written in x86 assembly”).

<table>
<tr><th></th><th>’200 Claim Language</th><th>Disclosure</th></tr>
<tr><td></td><td></td><td>• E8h (Set Resolution) - The mouse responds with acknowledge (FAh) then reads one byte from the host and again responds with acknowledge (FAh) then resets its movement counters. The byte read from the host determines the resolution as follows:
<table><tr><th>Byte Read from Host</th><th>Resolution</th></tr><tr><td>0x00</td><td>1 count/mm</td></tr><tr><td>0x01</td><td>2 count/mm</td></tr><tr><td>0x02</td><td>4 count/mm</td></tr><tr><td>0x03</td><td>8 count/mm</td></tr></table></td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td>2.</td><td>The apparatus as claimed in claim 1, further comprising a button set for clicking an icon selected by the mouse cursor.</td><td>PS/2 Mouse Interface discloses an apparatus as claimed in claim 1, further comprising a button set for clicking an icon selected by the mouse cursor.

See, e.g., Inputs, Resolution and Scaling (“The standard PS/2 mouse interface supports the following inputs: X (right/left) movement, Y (up/down) movement, left button, middle button, and right button. The mouse reads these inputs at a regular frequency and updates various counters and flags to reflect movement and button states. There are many PS/2 pointing devices that have additional inputs and may report data differently than described in this document. One popular extension I cover later in this document is the Microsoft Intellimouse, which includes support for the standard inputs as well as a scrolling wheel and two additional buttons.”)</td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td>3.</td><td>The apparatus as claimed in claim 2, wherein the button set has a left button and a right button.</td><td>PS/2 Mouse Interface discloses an apparatus as claimed in claim 2, wherein the button set has a left button and a right button.

See, e.g., Inputs, Resolution and Scaling (“The standard PS/2 mouse interface supports the following inputs: X (right/left) movement, Y (up/down) movement, left button,</td></tr>
</table>

	'200 Claim Language	**Disclosure**
		middle button, and right button. The mouse reads these inputs at a regular frequency and updates various counters and flags to reflect movement and button states. There are many PS/2 pointing devices that have additional inputs and may report data differently than described in this document. One popular extension I cover later in this document is the Microsoft Intellimouse, which includes support for the standard inputs as well as a scrolling wheel and two additional buttons.")
4.	The apparatus as claimed in claim 1, wherein the switching circuit is configured on a lateral surface of the mouse.	*PS/2 Mouse Interface discloses an apparatus as claimed in claim 1, wherein the switch is configured on a lateral surface of the mouse.* *See, e.g.*, Inputs, Resolution and Scaling ("The standard PS/2 mouse interface supports the following inputs: X (right/left) movement, Y (up/down) movement, left button, middle button, and right button. The mouse reads these inputs at a regular frequency and updates various counters and flags to reflect movement and button states. There are many PS/2 pointing devices that have additional inputs and may report data differently than described in this document. One popular extension I cover later in this document is the Microsoft Intellimouse, which includes support for the standard inputs as well as a scrolling wheel and two additional buttons.")
6.	An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	*To the extent the preamble is considered to limit the claim, PS/2 Mouse Interface discloses an apparatus for setting multi-stage displacement resolution of a mouse.* *See claim limitation 1.*
6A	a X-Y plane displacement detector, for sensing a distance and a moving direction	*PS/2 Mouse Interface discloses a X-Y plane displacement detector, for sensing a*

Invalidity of U.S. Patent No. 7,532,200 by PS 2 Mouse Interfacing Systems

	’200 Claim Language	Disclosure
	generated by the mouse in a two-dimensional space;	*distance and a moving direction generated by the mouse in a two-dimensional space.* *See claim limitation 1A.*
6B	an N-stage switch for setting a resolution value, the N-stage switching circuit having a switching button capable of being manually switched to one of the positions 1 to N, and accordingly activating a connected resolution setting pin to indicate a state, where N is a positive integer; and	*PS/2 Mouse Interface discloses an N-stage switch for setting a resolution value, the N-stage switching circuit having a switching button capable of being manually switched to one of the positions 1 to N, and accordingly activating a connected resolution setting pin to indicate a state, where N is a positive integer.* *See claim limitation 1B.*
6C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the state of the connected resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	*PS/2 Mouse Interface discloses a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the state of the connected resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.* *See claim limitation 1C.*

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	'200 Claim Language	**Disclosure**
7.	The apparatus as claimed in claim 6, further comprising a button set for clicking an icon selected by the mouse cursor.	*PS/2 Mouse Interface discloses an apparatus as claimed in claim 6, further comprising a button set for clicking an icon selected by the mouse cursor.* *See claim limitation 2.*
8.	The apparatus as claimed in claim 7, wherein the button set has a left button and a right button.	*PS/2 Mouse Interface discloses an apparatus as claimed in claim 7, wherein the button set has a left button and a right button.* *See claim limitation 3.*
9.	The apparatus as claimed in claim 6, wherein the N-stage switch is configured on a lateral surface of the mouse.	*PS/2 Mouse Interface discloses an apparatus as claimed in claim 6, wherein the N-stage switch is configured on a lateral surface of the mouse.* *See, e.g.*, Inputs, Resolution and Scaling ("The standard PS/2 mouse interface supports the following inputs: X (right/left) movement, Y (up/down) movement, left button, middle button, and right button. The mouse reads these inputs at a regular frequency and updates various counters and flags to reflect movement and button states. There are many PS/2 pointing devices that have additional inputs and may report data differently than described in this document. One popular extension I cover later in this document is the Microsoft Intellimouse, which includes support for the standard inputs as well as a scrolling wheel and two additional buttons.")

Invalidity of U.S. Patent No. 7,532,200 by IOGEAR GME 222 800 dpi USB Optical Mini Mouse Product Manual

Based upon the claim interpretations Better Mouse Company, LLC ("BMC") appears to be asserting and the applications of those interpretations to Defendants' products in BMC's Infringement Contentions, the IOGEAR GME 222 800 dpi USB Optical Mini Mouse Product Manual, http://www.iogear.com/support/manual/GME222%20manual.pdf anticipates and/or renders obvious, alone or in combination with other prior art identified in Defendants' Invalidity Contentions, the asserted claims as described in part below. This invalidity claim chart is not an admission by Defendants that the accused products, including any current or past versions of these products, are covered by, or infringe these claims, particularly when they are properly construed. Nothing in these contentions should be interpreted as an acquiescence to or assertion of a particular claim construction by Defendants.

	'200 Claim Language	**Disclosure**
1.	1. An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	*See, e.g.*, IOGEAR GME 222 800 dpi USB Optical Mini Mouse Product Manual, http://www.iogear.com/support/manual/GME222%20manual.pdf.
1A	a X-Y axis plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	*See, e.g.*, IOGEAR GME 222 800 dpi USB Optical Mini Mouse Product Manual, http://www.iogear.com/support/manual/GME222%20manual.pdf at part 5 "Pictorial Introduction."
1B	a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to generate the resolution value directly, each switch being coupled to a resolution setting pin, each resolution setting pin having a state determined by the switch coupled thereto; and	*See, e.g.*, IOGEAR GME 222 800 dpi USB Optical Mini Mouse Product Manual, http://www.iogear.com/support/manual/GME222%20manual.pdf at part 5 "Pictorial Introduction."
1C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the	*See, e.g.*, IOGEAR GME 222 800 dpi USB Optical Mini Mouse Product Manual, http://www.iogear.com/support/manual/GME222%20manual.pdf

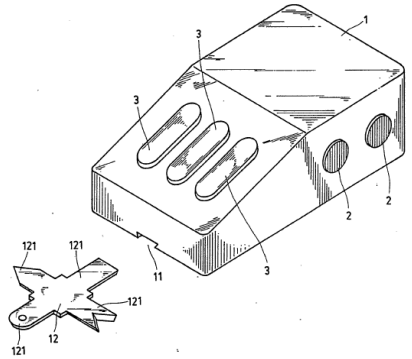
	'200 Claim Language	**Disclosure**
	mouse micro controller determining the resolution value based on the states of the resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	
2.	The apparatus as claimed in claim 1, further comprising a button set for clicking an icon selected by the mouse cursor.	*See, e.g.*, IOGEAR GME 222 800 dpi USB Optical Mini Mouse Product Manual, http://www.iogear.com/support/manual/GME222%20manual.pdf at part 5 "Pictorial Introduction."
3.	The apparatus as claimed in claim 2, wherein the button set has a left button and a right button.	*See, e.g.*, IOGEAR GME 222 800 dpi USB Optical Mini Mouse Product Manual, http://www.iogear.com/support/manual/GME222%20manual.pdf at part 5 "Pictorial Introduction."

	'200 Claim Language	**Disclosure**
4.	The apparatus as claimed in claim 1, wherein the switching circuit is configured on a lateral surface of the mouse.	*See, e.g.*, IOGEAR GME 222 800 dpi USB Optical Mini Mouse Product Manual, http://www.iogear.com/support/manual/GME222%20manual.pdf at part 5 "Pictorial Introduction."
6.	An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	*See claim limitation 1.*
6A	a X-Y plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	*See claim limitation 1A.*
6B	an N-stage switch for setting a resolution value, the N-stage switching circuit having a switching button capable of being manually switched to one of the positions 1 to N, and accordingly activating a connected resolution setting pin to indicate a state, where N is a positive integer; and	*See claim limitation 1B.*
6C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the state of the connected resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the	*See claim limitation 1C.*

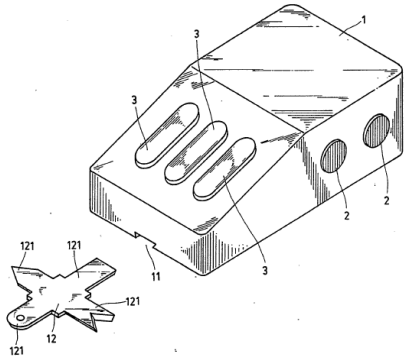
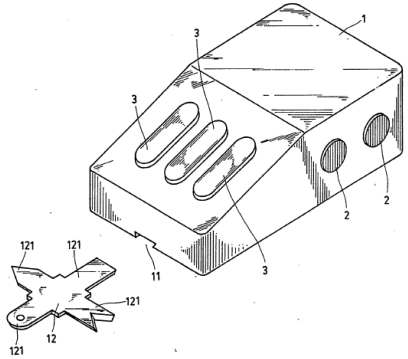
	'200 Claim Language	**Disclosure**
	register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	
7.	The apparatus as claimed in claim 6, further comprising a button set for clicking an icon selected by the mouse cursor.	*See claim limitation 2.*
8.	The apparatus as claimed in claim 7, wherein the button set has a left button and a right button.	*See claim limitation 3.*
9.	The apparatus as claimed in claim 6, wherein the N-stage switch is configured on a lateral surface of the mouse.	*See, e.g.*, IOGEAR GME 222 800 dpi USB Optical Mini Mouse Product Manual, http://www.iogear.com/support/manual/GME222%20manual.pdf at part 5 "Pictorial Introduction."

Invalidity of U.S. Patent No. 7,532,200 by GB 2215455 ("Kwang-Chien")

Based upon the claim interpretations Better Mouse Company, LLC ("BMC") appears to be asserting and the applications of those interpretations to Defendants' products in BMC's Infringement Contentions, United Kingdom patent no. GB 2215455 ("Kwang-Chien") anticipates and/or renders obvious, alone or in combination with other prior art identified in Defendants' Invalidity Contentions, the asserted claims as described in part below. This invalidity claim chart is not an admission by Defendants that the accused products, including any current or past versions of these products, are covered by, or infringe these claims, particularly when they are properly construed. Nothing in these contentions should be interpreted as an acquiescence to or assertion of a particular claim construction by Defendants.

	'200 Claim Language	**Disclosure**
1.	1. An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	*See, e.g.*, Figs. 1-3, pp. 1-13. 
1A	a X-Y axis plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	*See, e.g.*, Figs. 1-3, pp. 1-13.
1B	a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to generate the resolution value directly, each	*See, e.g.*, Figs. 1-3, pp. 1-13.

	'200 Claim Language	**Disclosure**
	switch being coupled to a resolution setting pin, each resolution setting pin having a state determined by the switch coupled thereto; and	
1C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the states of the resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	*See, e.g.*, Figs. 1-3, pp. 1-13.
2.	The apparatus as claimed in claim 1, further comprising a button set for clicking an icon selected by the mouse cursor.	*See, e.g.*, Figs. 1-3, pp. 1-13.

	'200 Claim Language	**Disclosure**
		
3.	The apparatus as claimed in claim 2, wherein the button set has a left button and a right button.	*See, e.g.*, Figs. 1-3, pp. 1-13.
4.	The apparatus as claimed in claim 1, wherein the switching circuit is configured on a lateral surface of the mouse.	*See, e.g.*, Figs. 1-3, pp. 1-13. 

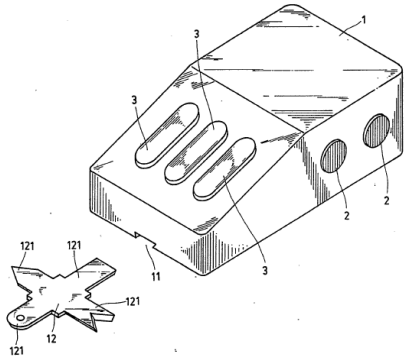
Invalidity of U.S. Patent No. 7,532,200 by GB 2215455 ("Kwang-Chien")

	'200 Claim Language	**Disclosure**
6.	An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	*See claim limitation 1.*
6A	a X-Y plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	*See claim limitation 1A.*
6B	an N-stage switch for setting a resolution value, the N-stage switching circuit having a switching button capable of being manually switched to one of the positions 1 to N, and accordingly activating a connected resolution setting pin to indicate a state, where N is a positive integer; and	*See claim limitation 1B.*
6C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the state of the connected resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane	*See claim limitation 1C.*

Invalidity of U.S. Patent No. 7,532,200 by GB 2215455 ("Kwang-Chien")

	'200 Claim Language	**Disclosure**
	displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	
7.	The apparatus as claimed in claim 6, further comprising a button set for clicking an icon selected by the mouse cursor.	*See claim limitation 2.*
8.	The apparatus as claimed in claim 7, wherein the button set has a left button and a right button.	*See claim limitation 3.*
9.	The apparatus as claimed in claim 6, wherein the N-stage switch is configured on a lateral surface of the mouse.	*See, e.g.*, Figs. 1-3, pp. 1-13.

Invalidity of U.S. Patent No. 7,532,200 by GB 2215455 ("Kwang-Chien")

	’200 Claim Language	Disclosure
		

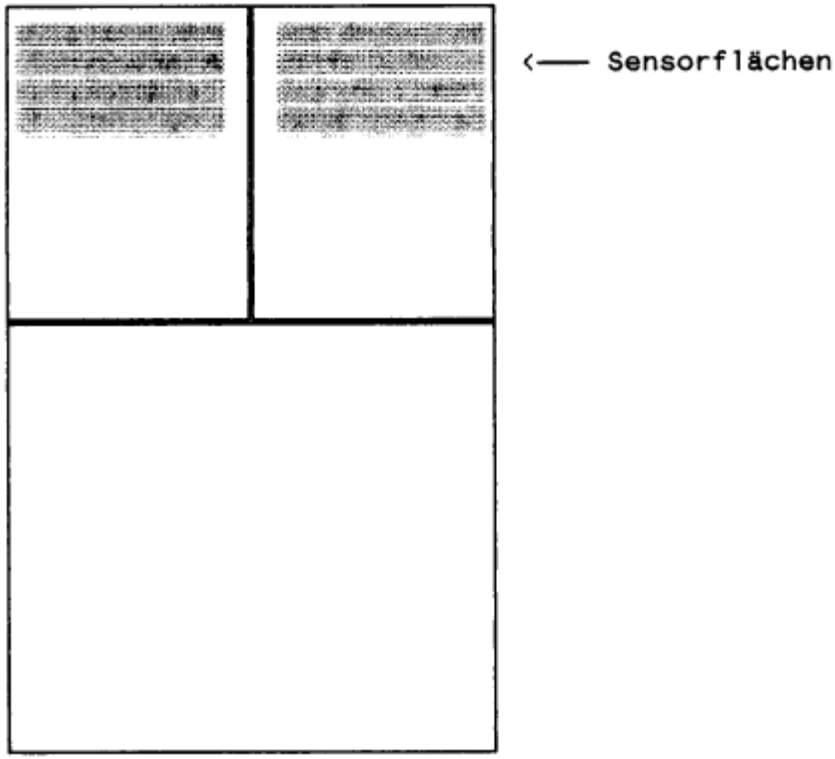
Invalidity of U.S. Patent No. 7,532,200 by German Patent No. DE 4125049 ("Henning")

Based upon the claim interpretations Better Mouse Company, LLC ("BMC") appears to be asserting and the applications of those interpretations to Defendants' products in BMC's Infringement Contentions, German Patent No. DE 4125049 to Henning issued on January 16, 1992 ("Henning") anticipates and/or renders obvious, alone or in combination with other prior art identified in Defendants' Invalidity Contentions, the asserted claims as described in part below. This invalidity claim chart is not an admission by Defendants that the accused products, including any current or past versions of these products, are covered by, or infringe these claims, particularly when they are properly construed. Nothing in these contentions should be interpreted as an acquiescence to or assertion of a particular claim construction by Defendants.

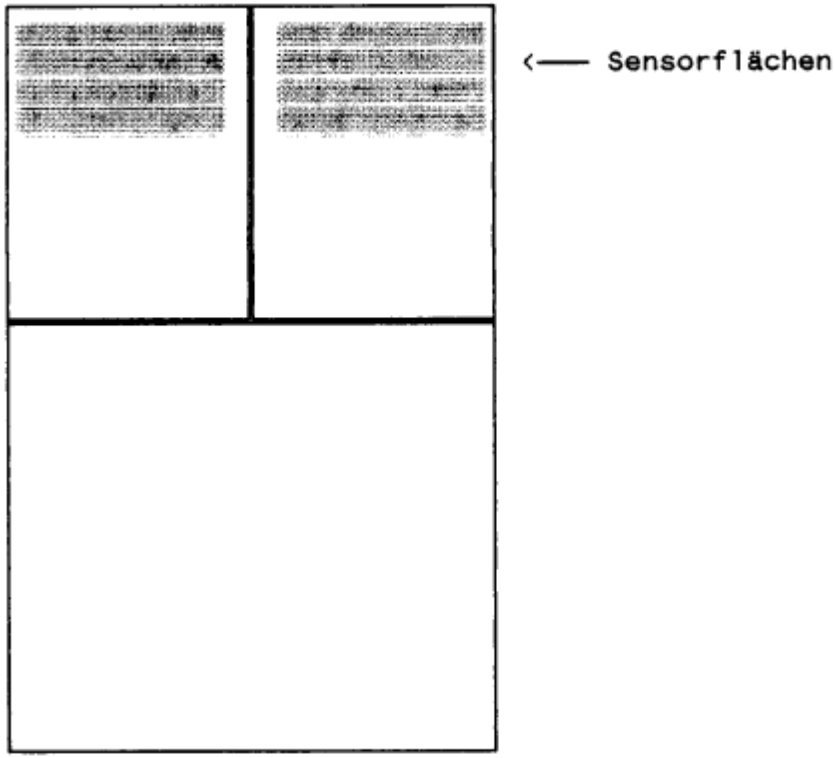
	'200 Claim Language	**Disclosure**
1.	1. An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	*To the extent the preamble is considered to limit the claim, Henning discloses an apparatus that sets the multi-stage displacement resolution of a mouse.* *See, e.g.*, Abstract, pp. 1-4. Abstract ("The computer mouse incorporates a number of operating keys which have three different switch stages for providing a dual functionality, allowing controlled variation of the path/pixel ratio during use. The path/pixel ratio for a dynamic mouse used for computer-assisted design is matched to the displacement characteristics. Each operating key can be moved from its rest position into a semi-depressed and a fully-depressed position. ADVANTAGE- Rapid, light and accurate positioning of cursor.")
1A	a X-Y axis plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	*Henning discloses an X-Y axis plane displacement detector that senses the distance and moving direction of the mouse.* *See, e.g.*, Abstract, English Translation pp. 1-3. Description at pp. 1-2 English Translation ("The invention is intended to remedy by the user; themselves, directly and accurately predicts the path-to-pixel ratio. The invention consists in that the individual mouse buttons have dual functionality, so that you also

	'200 Claim Language	**Disclosure**
		may affect the way-to-pixel relationship with them. So there is no longer just the 2 switching states "Pressed" and "Not pressed", but the 3 states: "pressed", "Touched" and "Untouched"! Specifically, this is achieved by equipping the mouse buttons with touch-sensitive sensor surfaces, see drawing. "Press halfway" Simple switch to the states "Pressed" and "Not pressed" are of course possible, but not as pleasant to use. "Pressed half" corresponds here "Touched") Various configurations are conceivable, a very sensible I would now like to explain, describe in detail as an example: A two-button mouse with 2 sensor keys, absolute change the Mickey rate, which emits the mouse per unit path, characterized compatibility with old software: Moving without a key to touch the mouse, so is the way to Mickey ratio and thus the path-to-pixel ratio is small (smaller way, great cursor movement), also if you touch both buttons (this is important, if you want to travel long distances with the cursor, press the mouse button). If you move the mouse and touching only the left mouse button, the path-to-Mickey-ratio is reduced (great way to small cursor movement). The strength of the reduction is adjustable via a sat screw with a very fine grid on the mouse. Now so you can position the cursor accurately with your finger on the button, and then perform the search. With a slide switch to select the operating mode of the mouse: none, one or two touch-sensitive buttons (or the resulting functionality). Of course you could also modify mouse driver and minimize instead d the Mickey sends you rate the driver the corresponding information as a command. You see, the possibilities of the technical realization of both hardware as software-very, very diverse.")
1B	a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to	*Henning discloses a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to generate the resolution value directly, each switch being coupled to a resolution setting pin, each resolution*

	'200 Claim Language	Disclosure
	generate the resolution value directly, each switch being coupled to a resolution setting pin, each resolution setting pin having a state determined by the switch coupled thereto; and	*setting pin having a state determined by the switch coupled thereto.* *See, e.g.*, Abstract, English Translation pp. 1-3.
1C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the states of the resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	*Henning discloses a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the states of the resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.* *See, e.g.*, Abstract, English Translation pp. 1-3.
2.	The apparatus as claimed in claim 1, further comprising a button set for clicking an icon selected by the mouse cursor.	*Henning discloses an apparatus as claimed in claim 1, further comprising a button set for clicking an icon selected by the mouse cursor.* *See, e.g.*, Abstract, English Translation pp. 1-3.

	'200 Claim Language	**Disclosure**
		See, e.g., Abstract, English Translation pp. 1-3.  Fig. 1: Zweitastenmaus mit Sensorflächen

Invalidity of U.S. Patent No. 7,532,200 by German Patent No. DE 4125049 ("Henning")

	'200 Claim Language	**Disclosure**
3.	The apparatus as claimed in claim 2, wherein the button set has a left button and a right button.	*Henning discloses an apparatus as claimed in claim 2, wherein the button set has a left button and a right button.*  Fig. 1: Zweitastenmaus mit Sensorflächen

Invalidity of U.S. Patent No. 7,532,200 by German Patent No. DE 4125049 ("Henning")

	'200 Claim Language	**Disclosure**
4.	The apparatus as claimed in claim 1, wherein the switching circuit is configured on a lateral surface of the mouse.	*Henning discloses an apparatus as claimed in claim 1, wherein the switch is configured on a lateral surface of the mouse.* Switches on the lateral surface of the mouse were well-known in the art at the time of the alleged invention and would have been obvious to combine with this art.
6.	An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	*To the extent the preamble is considered to limit the claim, Henning discloses an apparatus for setting multi-stage displacement resolution of a mouse.* *See claim limitation 1.*
6A	a X-Y plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	*Henning discloses a X-Y plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space.* *See claim limitation 1A.*
6B	an N-stage switch for setting a resolution value, the N-stage switching circuit having a switching button capable of being manually switched to one of the positions 1 to N, and accordingly activating a connected resolution setting pin to indicate a state, where N is a positive integer; and	*Henning discloses an N-stage switch for setting a resolution value, the N-stage switching circuit having a switching button capable of being manually switched to one of the positions 1 to N, and accordingly activating a connected resolution setting pin to indicate a state, where N is a positive integer.* *See claim limitation 1B.*
6C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the	*Henning discloses a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the state of the connected resolution setting*

	'200 Claim Language	**Disclosure**
	mouse micro controller determining the resolution value based on the state of the connected resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	*pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.* *See claim limitation 1C.*
7.	The apparatus as claimed in claim 6, further comprising a button set for clicking an icon selected by the mouse cursor.	*Henning discloses an apparatus as claimed in claim 6, further comprising a button set for clicking an icon selected by the mouse cursor.* *See claim limitation 2.*
8.	The apparatus as claimed in claim 7, wherein the button set has a left button and a right button.	*Henning discloses an apparatus as claimed in claim 7, wherein the button set has a left button and a right button.* *See claim limitation 3.*

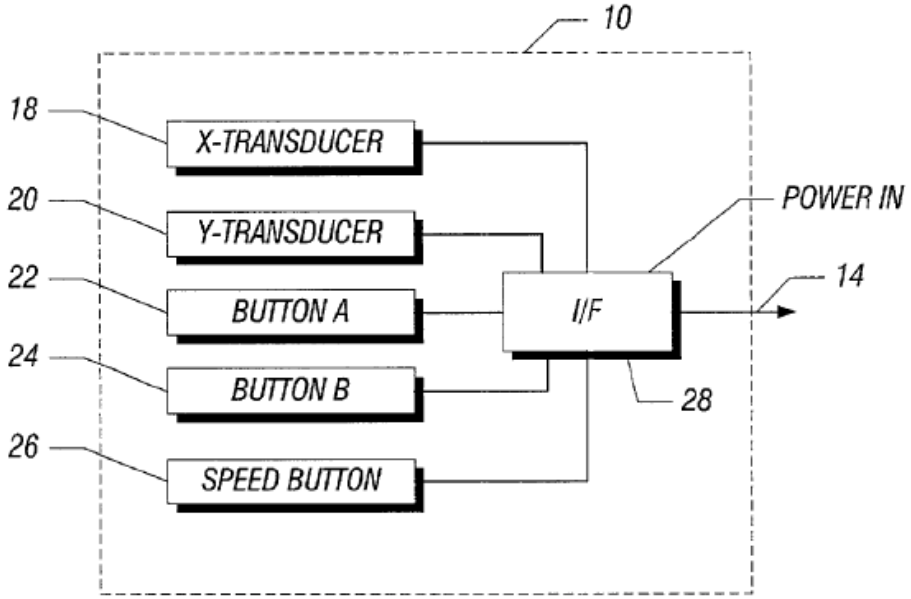
Invalidity of U.S. Patent No. 7,532,200 by German Patent No. DE 4125049 ("Henning")

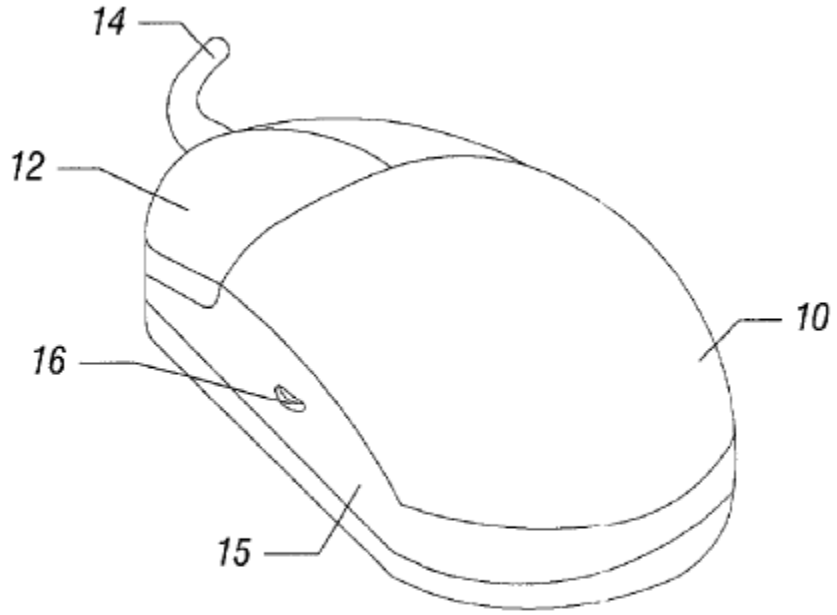
	'200 Claim Language	**Disclosure**
9.	The apparatus as claimed in claim 6, wherein the N-stage switch is configured on a lateral surface of the mouse.	*Henning discloses an apparatus as claimed in claim 6, wherein the N-stage switch is configured on a lateral surface of the mouse.* N-Stage switch and switches on the lateral surface of the mouse were well-known in the art at the time of the alleged invention and would have been obvious to combine with this art.

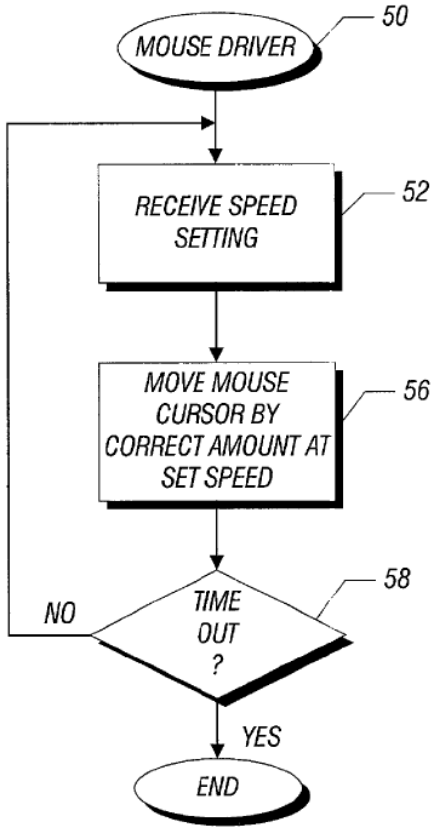
Invalidity of U.S. Patent No. 7,532,200 by U.S. Patent Publication No. 2002/0135563 A1 ("Canakapalli")

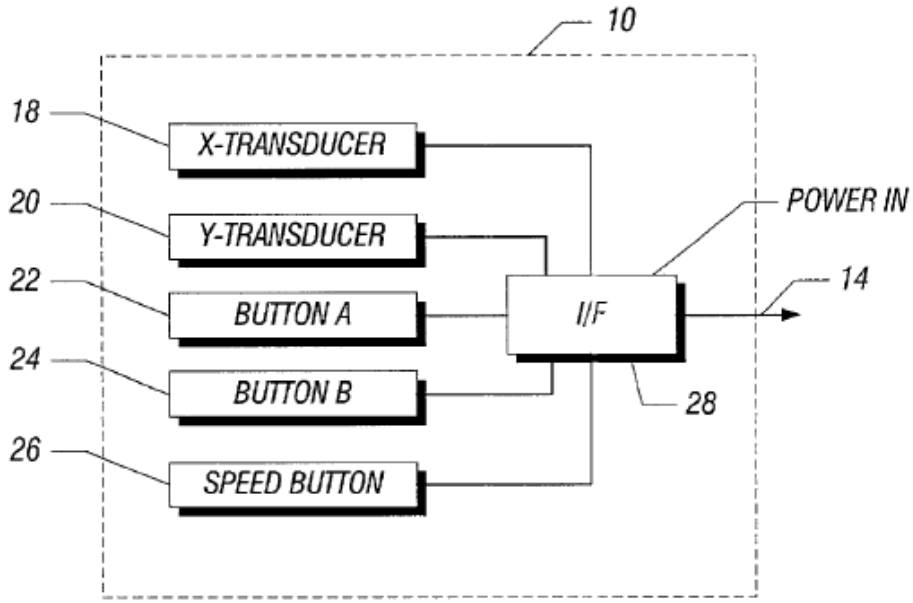
Based upon the claim interpretations Better Mouse Company, LLC ("BMC") appears to be asserting and the applications of those interpretations to Defendants' products in BMC's Infringement Contentions, U.S. Patent Publication No. 2002/0135563 to Canakapalli anticipates and/or renders obvious, alone or in combination with other prior art identified in Defendants' Invalidity Contentions, the asserted claims as described in part below. This invalidity claim chart is not an admission by Defendants that the accused products, including any current or past versions of these products, are covered by, or infringe these claims, particularly when they are properly construed. Nothing in these contentions should be interpreted as an acquiescence to or assertion of a particular claim construction by Defendants.

	'200 Claim Language	**Disclosure**
1.	1. An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	*To the extent the preamble is considered to limit the claim, Canakapalli discloses an apparatus that sets the multi-stage displacement resolution of a mouse.* *See, e.g.*, Abstract.
1A	a X-Y axis plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	*Canakapalli discloses an X-Y axis plane displacement detector that senses the distance and moving direction of the mouse.* *See, e.g.*, Abstract, paragraphs 0014, 0021, 0022, 0024.

	'200 Claim Language	**Disclosure**
		 **FIG. 2** *See, e.g.*, at [0014] ("For example, the interface 28 may receive X and Y transducer commands, indicative of the direction of movement of the device 10, and, at least indirectly, the rate of speed of movement of the mouse 10. Thus, signals from the X transducer 18 and y transducer 20 may be coupled through the interface 28 to the cable 14. Likewise, signals from a button 12 may be received as indicated at 22 as well as signals from a second button as indicated at 24. All these signals may be converted to an appropriate format and sent on to a processor-based system by the interface 28. Similarly, inputs from the control 16 may be transferred, as indicated at 26, through the interface 28 to the cable 14.")

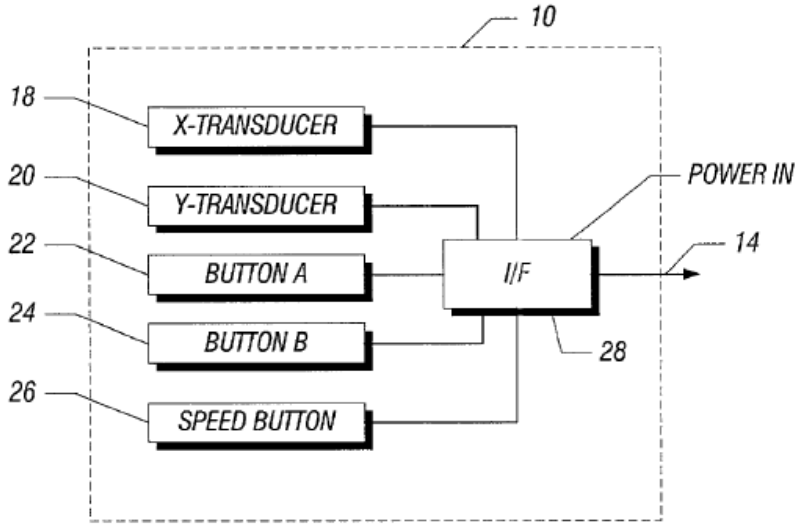
	'200 Claim Language	**Disclosure**
		 FIG. 1
1B	a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to generate the resolution value directly, each switch being coupled to a resolution setting pin, each resolution setting pin having a state determined by the switch coupled	*Canakapalli discloses a switching circuit for setting a resolution value, the switching circuit having multiple switches for being manually adjusted to generate the resolution value directly, each switch being coupled to a resolution setting pin, each resolution setting pin having a state determined by the switch coupled thereto.*

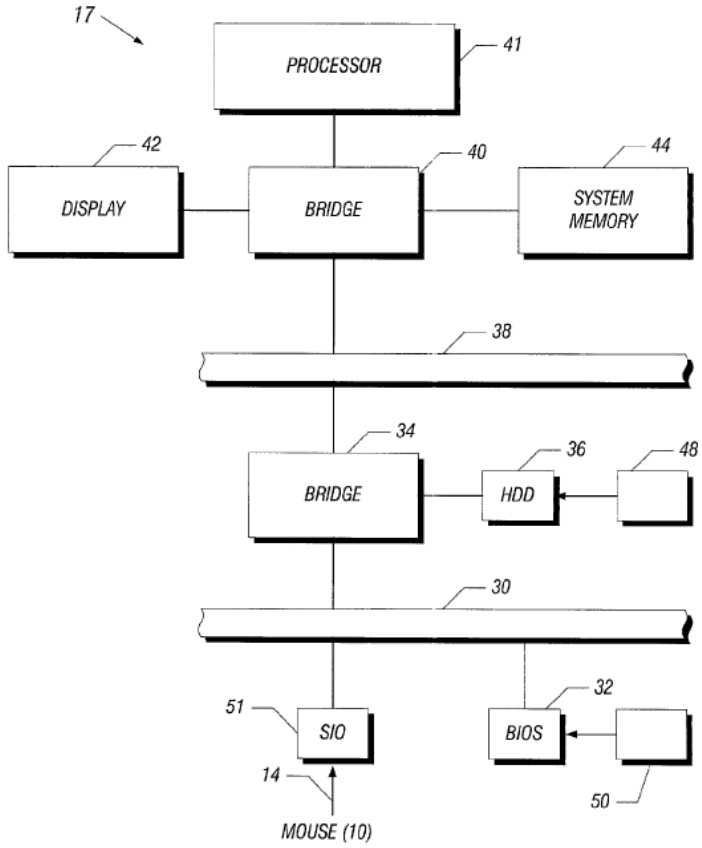
	'200 Claim Language	**Disclosure**
	thereto; and	 **FIG. 4** *See, e.g.*, at [0014] ("For example, the interface 28 may receive X and Y transducer commands, indicative of the direction of movement of the device 10, and, at least

	'200 Claim Language	Disclosure
		indirectly, the rate of speed of movement of the mouse 10. Thus, signals from the X transducer 18 and y transducer 20 may be coupled through the interface 28 to the cable 14. Likewise, signals from a button 12 may be received as indicated at 22 as well as signals from a second button as indicated at 24. All these signals may be converted to an appropriate format and sent on to a processor-based system by the interface 28. Similarly, inputs from the control 16 may be transferred, as indicated at 26, through the interface 28 to the cable 14.")  FIG. 2

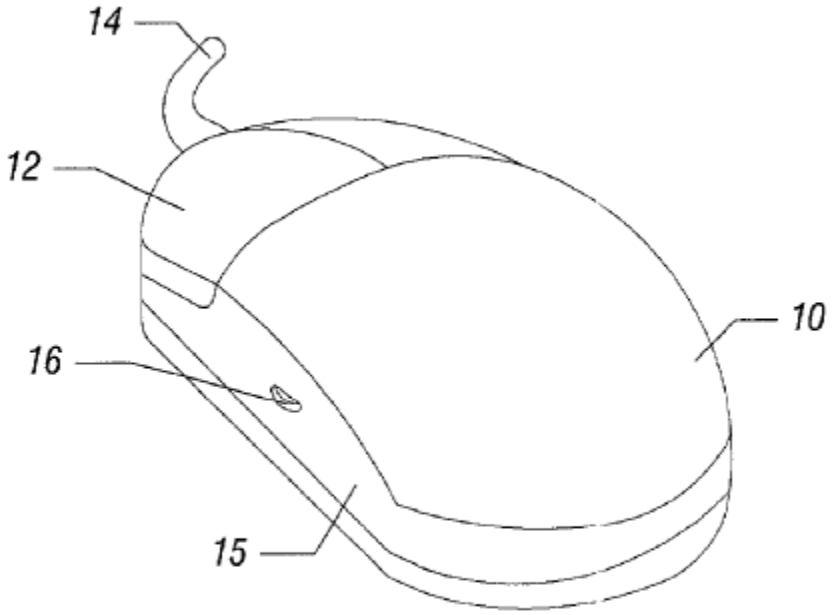
	'200 Claim Language	**Disclosure**
		See, e.g., at [0013] ("In general, any control 16 that enables the user to adjust the speed of cursor movements "on-the-?y" in the course of operating the pointing device 10 may be useful in some embodiments of the present invention.") [0014] ("Referring to FIG. 2, the pointing device 10 may include an interface that serializes input commands in one embodiment. For example, the interface 28 may receive X and y transducer commands, indicative of the direction of movement of the device 10, and, at least indirectly, the rate of speed of movement of the mouse 10. Thus, signals from the X transducer 18 and y transducer 20 may be coupled through the interface 28 to the cable 14. Likewise, signals from a button 12 may be received as indicated at 22 as well as signals from a second button as indicated at 24. All these signals may be converted to an appropriate format and sent on to a processor-based system by the interface 28. Similarly, inputs from the control 16 may be transferred, as indicated at 26, through the interface 28 to the cable 14.") [0021] ("Software 48 or 50 for enabling the speed of cursor movements to be manually controlled through the use of the control 16 may be stored in a variety of storage devices on the processor-based system 17. For example, initially, the software 48 may be stored on the hard disk drive 36 or the software 50 may be stored on the BIOS memory 32. The BIOS memory 32 may be a read only memory (ROM) or a flash memory, as two examples.") [0022] ("The driver software 48 or 50 may receive a speed command as indicated in block 52 from the control 16 through the interface 28. In one embodiment, the speed setting may be received as an non-maskable interrupt (NMI). When received, a mouse cursor command may be generated to move the cursor image by the distance indicated by pointing device 10 movement, at the determined speed (received from the control 16), as indicated in block 56. Thus, the user's ongoing cursor speed commands may be

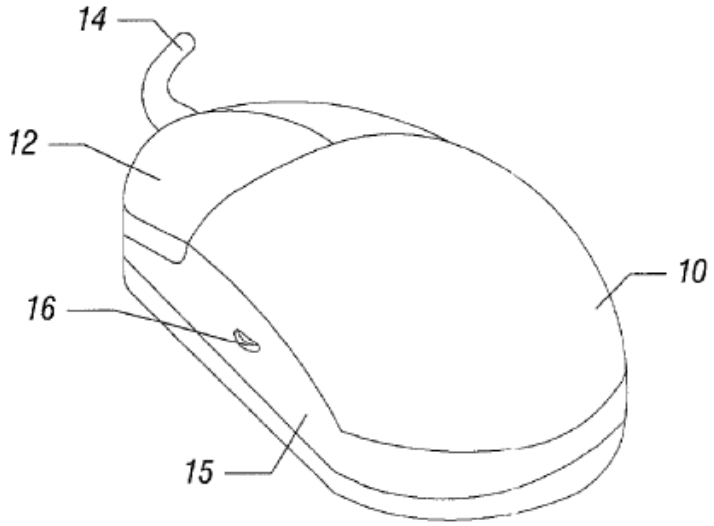
	'200 Claim Language	Disclosure
		received together with information about the movement of the pointing device 10 to allow the speed at which the onscreen cursor image moves in response to mouse movements to be adjusted "on-the-fly"." [0024] ("In a number of cases, the user may manually adjust the speed at Which the user is able to input data by moving the on-screen cursor at a higher speed or conversely a lower speed if that is desired. In game play, this may make the user much more agile. In cases Where more complex mouse cursor movements are needed, the user can slow down the rate of cursor movement to avoid overrunning the desired targets and otherwise wasting time because of over aggressive cursor positioning.") A person of ordinary skill in the art would understand that setting the mouse speed includes setting the dpi resolution setting.
1C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the states of the resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor	*Canakapalli discloses a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the states of the resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.* *See, e.g.*, claim 11 ("11. A method comprising: enabling a mouse to generate position signals; and enabling a mouse to receive manual input commands to alter the rate of movement of an on-screen cursor.") Claim 13 ("13. A pointing device comprising: a first element to generate pointing

	'200 Claim Language	Disclosure
	on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	device position signals; and a second device attached to the first device to provide cursor speed control signals.") Claim 14 ("14. The pointing device of claim 13 wherein said pointing device is a mouse.") Claim 15 ("15. The pointing device of claim 14 including a mouse body having a curved upper surface and a peripheral side wall, a roller switch being positioned in said side wall, said roller switch operable to increase or decrease the speed of cursor movement.")  FIG. 2

	'200 Claim Language	**Disclosure**
		 FIG. 3
2.	The apparatus as claimed in claim 1, further comprising a button set for clicking	*Canakapalli discloses an apparatus as claimed in claim 1, further comprising a button*

	'200 Claim Language	**Disclosure**
	an icon selected by the mouse cursor.	*set for clicking an icon selected by the mouse cursor*. *See, e.g.*, [0020] ("Conventionally, an on-screen cursor moves on the display 42 in response to movements of the pointing device 10.") [0002] ("Conventionally, a mouse is utilized in processor based systems to enable the user to supply input commands. The user can move the mouse in the user's hand to adjust the position of an on-screen cursor. Various options or icons displayed on screen may then be selected by operating mouse buttons.")
3.	The apparatus as claimed in claim 2, wherein the button set has a left button and a right button.	*Canakapalli discloses an apparatus as claimed in claim 2, wherein the button set has a left button and a right button.* *See, e.g.*, Figs 1-2 and associated text describing the figures in the Specification.

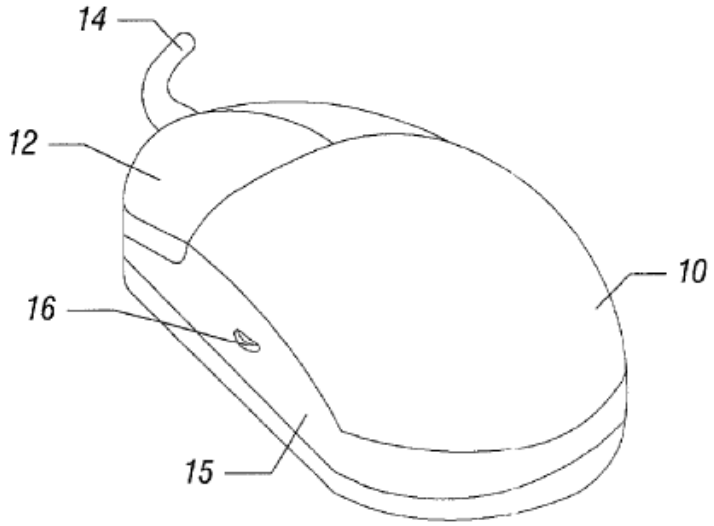
	'200 Claim Language	**Disclosure**
		 FIG. 1
4.	The apparatus as claimed in claim 1, wherein the switching circuit is configured on a lateral surface of the mouse.	*Canakapalli discloses an apparatus as claimed in claim 1, wherein the switch is configured on a lateral surface of the mouse.*

	'200 Claim Language	**Disclosure**
		 **FIG. 1** [0011] ("Referring to FIG. 1, a pointing device 10, such as mouse, may include at least one button 12 and a cable 14 that is conventionally a Universal Serial Bus or other serial interface cable that couples a pointing device to a processor based system. The body 15 has a side wall 13 that includes a control 16. When the user grasps the pointing device 10 in the palm of the user's hand, the user's thumb may conveniently be positioned atop the control 16. That is, in normal use, the user's thumb tends to rest on the side wall 13. The control 16 may be positioned so as to be under the user's thumb when the user's hand is positioned conventionally on the pointing device 10 in

	'200 Claim Language	**Disclosure**
		one embodiment.")
6.	An apparatus for setting multi-stage displacement resolution of a mouse, comprising:	*To the extent the preamble is considered to limit the claim, Canakapalli discloses an apparatus for setting multi-stage displacement resolution of a mouse.* *See claim limitation 1.*
6A	a X-Y plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space;	*Canakapalli discloses a X-Y plane displacement detector, for sensing a distance and a moving direction generated by the mouse in a two-dimensional space.* *See claim limitation 1A.*
6B	an N-stage switch for setting a resolution value, the N-stage switching circuit having a switching button capable of being manually switched to one of the positions 1 to N, and accordingly activating a connected resolution setting pin to indicate a state, where N is a positive integer; and	*Canakapalli discloses an N-stage switch for setting a resolution value, the N-stage switching circuit having a switching button capable of being manually switched to one of the positions 1 to N, and accordingly activating a connected resolution setting pin to indicate a state, where N is a positive integer.* *See claim limitation 1B.* *See, e.g.*, at [0013] ("In one embodiment, the control 16 may be a roller whose direction of movement selectively increases or decreases the cursor speed. The control 16 may be implemented in a variety of different forms. The control 16 may include a pair of up and down pushbuttons, a rocker button, a joy stick, a tilt switch, or even a pressure responsive switch, to mention a few examples. In general, any control 16 that enables the user to adjust the speed of cursor movements "on-the-fly" in the course of operating the pointing device 10 may be useful in some embodiments of the present invention.")

	'200 Claim Language	**Disclosure**
		See, e.g., at [0011]-[0014].
6C	a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the state of the connected resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.	*Canakapalli discloses a mouse micro controller with a register, coupled to the X-Y axis plane displacement detector and the switching circuit, the mouse micro controller determining the resolution value based on the state of the connected resolution setting pins, setting a mouse resolution based on the resolution value and storing the resolution value in the register, the mouse micro controller responding to the distance and moving direction sensed by the X-Y axis plane displacement detector to provide a control signal to a computer connected to the mouse, thereby moving the mouse cursor on a screen of the computer, the mouse cursor being moved directly based on the resolution value stored in the register.* *See claim limitation 1C.*
7.	The apparatus as claimed in claim 6, further comprising a button set for clicking an icon selected by the mouse cursor.	*Canakapalli discloses an apparatus as claimed in claim 6, further comprising a button set for clicking an icon selected by the mouse cursor.* *See claim limitation 2.*

Invalidity of U.S. Patent No. 7,532,200 by U.S. Patent Publication No. 2002/0135563 A1 ("Canakapalli")

	'200 Claim Language	**Disclosure**
8.	The apparatus as claimed in claim 7, wherein the button set has a left button and a right button.	*Canakapalli discloses an apparatus as claimed in claim 7, wherein the button set has a left button and a right button.* *See claim limitation 3.*
9.	The apparatus as claimed in claim 6, wherein the N-stage switch is configured on a lateral surface of the mouse.	*Canakapalli discloses an apparatus as claimed in claim 6, wherein the N-stage switch is configured on a lateral surface of the mouse.*  FIG. 1

	'200 Claim Language	**Disclosure**
		[0011] ("Referring to FIG. 1, a pointing device 10, such as mouse, may include at least one button 12 and a cable 14 that is conventionally a Universal Serial Bus or other serial interface cable that couples a pointing device to a processor based system. The body 15 has a side wall 13 that includes a control 16. When the user grasps the pointing device 10 in the palm of the user's hand, the user's thumb may conveniently be positioned atop the control 16. That is, in normal use, the user's thumb tends to rest on the side wall 13. The control 16 may be positioned so as to be under the user's thumb when the user's hand is positioned conventionally on the pointing device 10 in one embodiment.")